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BRIDGEWATER STATE COLLEGE
BRIDGEWATER, MASSACHUSETTS 02324



BRIDGEWATER STATE COLLEGE

Undergraduate/Graduate Catalogue
1983-1985

The 145th Anniversary Year

Calendar - 1984-1985

First Semester, 1984

September

- 4 (Tuesday) Orientation Day
- 5 (Wednesday) Classes begin at 8:00 a.m.
- 18 (Tuesday) Fall Convocation at 11:00 a.m.
- 28 (Friday) Last day for graduate students to file request for November Comprehensive Examinations.

October

- 1 (Monday) ... Last day for receiving completed master's degree and CAGS applications for November admissions.
- 8 (Monday) Columbus Day - no classes
- 10 (Wednesday) Monday schedule of classes
- 19 (Friday) End of First Quarter

November

- 1-30 Graduate Comprehensive Examinations
- 1 (Thursday) .. Last day for graduate students who expect to receive their degree in February to file appropriate degree application form.
- 12 (Monday) Veteran's Day - no classes
- 15, 16, 19, 20 Registration for Second Semester
- 21 (Wednesday) .. Thanksgiving Recess begins at the close of classes
- 26 (Monday) Classes resume at 8:00 a.m.

December

- 3 (Monday) Last day for graduate students who anticipate completion of degree work in May to file the Petition for Acceptance of Transfer Credit.
- 11 (Tuesday) First Semester Classes end.
- 12 (Wednesday) First Semester Examinations begin.
- 21 (Friday) First Semester Examinations end.

Second Semester, 1985

January

- 7, 8 (Monday & Tuesday) Orientation Days
- 15 (Tuesday) Martin Luther King Jr.'s Birthday
- 16 (Wednesday) Classes begin at 8:00 a.m.

February

- 4 (Monday) ... Last day for graduate students who expect to receive their degree in May to file the appropriate degree application forms; Last day for graduate students to file request for April Comprehensive Examinations.
- 18 (Monday) Washington's Birthday - no classes.

March

- 8 (Friday) End of Third Quarter - Spring Recess begins at the close of classes.
- 25 (Monday) Classes resume at 8:00 a.m.
- 29 (Friday) Last day for receiving completed master's degree and CAGS applications for May admissions.

April

- 15 (Monday) Patriot's Day - no classes.
- 23, 24, 25 Registration for First Semester, 1985-1986

May

- 6 (Monday) ... Last day for graduate students who expect to receive their degree in August to file the appropriate degree application form; Last day for graduate students who anticipate the completion of degree work in August to file the Petition for Acceptance of Transfer Credit.
- 10 (Friday) Second Semester Classes end.
- 13 (Monday) Reading Day - no classes.
- 14 (Tuesday) Second Semester Examinations begin.
- 23 (Thursday) Second Semester Examinations end.
- 24 (Friday) Commencement
- 28, 29, 30, 31 New Student Orientation Days



Bridgewater State College

Undergraduate/Graduate Catalogue

1983-1985



Accreditation and Approval

The New England Association of Schools and Colleges, Inc.
The National Council for the Accreditation of Teacher Education
The American Chemical Society
The Interstate Certification Compact
The Council on Social Work Education

Memberships and Associations

The American Association of State Colleges and Universities
The American Association of Colleges for Teacher Education
Association for School, College, and University Staffing (ASCUS)
College Placement Council
Council for Advancement and Support of Education (CASE)
The Council of Graduate Schools in the United States
The Northeastern Association of Graduate Schools
The Association of Graduate Deans of Northeastern State Colleges
SACHEM (Southeastern Association for Cooperation in
Higher Education in Massachusetts)
Massachusetts System of Public Higher Education Institutions

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Policy on Non-Discrimination and Affirmative Action

As part of the Massachusetts Public Higher Education System, Bridgewater State College is committed to a policy of non-discrimination and affirmative action in its educational programs, activities, and employment practices. It is the policy of the College not to discriminate on the basis of race, sex, color, national origin, age, religion, or handicap, in fulfillment of the requirements of Executive Orders 11246 and 11375, Titles IV, VI, VII, IX and X of the Civil Rights Act of 1964 as amended in 1972, and all pertinent Laws, Regulations, and Executive Directives of the Commonwealth of Massachusetts and other applicable state and federal statutes. Inquiries concerning the College's compliance with Affirmative Action programs may be addressed to Assistant to the President, Affirmative Action/Minority Affairs, Bridgewater State College, Bridgewater, MA 02324. Telephone (617) 697-1240, or the Office for Civil Rights, Washington, D.C.

Charlotte Brown, Class of 1844 -

When Miss Brown entered the school, the school year was divided into two terms of fourteen weeks each. Female applicants had to be at least sixteen years of age and male applicants had to be seventeen.

These applicants had to present themselves on the first day of the term and be examined in reading, spelling, writing, geography, grammar, and arithmetic, and they had to pledge to teach in Massachusetts after graduation.

In 1985, Bridgewater State College celebrates the 145th anniversary of its founding, and we salute the students and faculty of so many generations who built the foundations of excellence which we are committed to maintaining today.



This is Bridgewater State College



Introducing Bridgewater

Since its founding in 1840, Bridgewater State College has offered its select student body exceptional opportunities for learning and maturing. Bridgewater is a place where students are encouraged to grow intellectually, to explore wide areas of knowledge and their own potential, nurtured and guided by a gifted faculty of men and women who sustain the College's reputation for academic excellence.

The following is a profile of Bridgewater State College at the 145th anniversary of its founding:

- **Location:** Bridgewater, Massachusetts, approximately 28 miles south of Boston in historic Plymouth County.
- **Character:** State-supported, four-year, co-educational.
- **Students:** 5,200 full-time undergraduate students are currently enrolled. In addition, approximately 1,500 graduate students are enrolled in the Program of Graduate and Continuing Education, which offers

an extensive program of late afternoon, evening and weekend courses for part-time undergraduate and graduate learning as well as personal enrichment. Total enrollment in all programs, year-round, exceeds 12,000 people.

- **Faculty:** 280 full-time faculty members, of whom 70% hold earned doctorates.
- **Campus:** 26 academic and residential buildings on a 170-acre campus.
- **Tuition and Fees (1984-1985 academic year):** Full-time undergraduate students who are Massachusetts residents pay approximately \$900.00 per year in tuition (this is a projected figure subject to possible slight modification) and approximately \$320.00 in required fees. Students residing on campus are charged between \$1,030.00 and \$1,330.00 per year, depending on the facility occupied. Board for resident students averages between \$1,057.00 and \$1,112.00, depending on the meal plan selected. Please note that all figures are subject to change. For complete information on tuition and fees for all students, see section entitled "Tuition and Fees," pages 41 and 42.

- **Undergraduate Majors:** Twenty-seven undergraduate majors are currently offered. For more detailed information, see section beginning on page 47.

ANTHROPOLOGY

(one may concentrate in):

Cultural Anthropology
Public Archeology

ART

AVIATION SCIENCE

(choose one concentration):

Flight Training
Aviation Management

BIOLOGY

BUSINESS - see

Management Science

CHEMISTRY

PROFESSIONAL CHEMISTRY

CHEMISTRY-GEOLOGY

COMMUNICATION ARTS & SCIENCES

(choose one concentration):

Speech Communication
Theatre Arts
Communication Disorders

COMPUTER SCIENCE

EARLY CHILDHOOD

EDUCATION

(choose one concentration):

Pre-School
Kindergarten-Primary

EARTH SCIENCES

(one may concentrate in):

Geology

ELEMENTARY EDUCATION

ENGLISH

FRENCH

GEOGRAPHY

HISTORY

MANAGEMENT SCIENCE

(choose one concentration):

General Management
Energy & Environmental
Resources
Finance & Accounting
Marketing
Transportation
Information Systems

MATHEMATICS

PHILOSOPHY

PHYSICAL EDUCATION

(choose one concentration):

Athletic Training
Coaching
Exercise Science/
Health Fitness
Health
Motor Development Therapy
Physical Education for
Adolescents & Adults
Physical Education for Pre-
Adolescent Children
Recreation

PHYSICS

POLITICAL SCIENCE

(one may concentrate in):

Public Administration
International Affairs

PSYCHOLOGY

(one may concentrate in):

Industrial-Personnel
Psychology
Medical Psychology

SOCIAL WORK

SOCIOLOGY

(one may concentrate in):

Criminology
Third World Studies

SPANISH

SPECIAL EDUCATION



- **Graduate Programs:** Thirty-six master's degree and CAGS (Certificate of Advanced Graduate Study) programs are offered, plus a Collaborative Doctoral Program with the University of Massachusetts. For complete information see "The Graduate School" section, page 57.

Master of Arts (M.A.)

Biology
Chemistry
Communication Studies
English
History
Humanities
Psychology*
*Pending Board of Regents
Approval

Master of Arts in Teaching (M.A.T.)

Behavioral Sciences
Biology
Creative Arts
Chemical Sciences
Earth Sciences
English
Foreign Languages
Geography
History
Humanities
Mathematics
Physical Sciences
Physics
Social Sciences
Speech Communication and
Theatre

Master of Education (M.Ed.)

Counseling
Early Childhood Education
Elementary Education
Health Science
Instructional Media
Reading
School Administration
School Librarianship
Special Education

Master of Science (M.S.)

Physical Education

Certificate of Advanced Graduate Study

Behavioral Sciences
Creative Arts
Education
Natural Sciences and
Mathematics

University of Massachusetts at Amherst Collaborative Doctor in Education Program

- **Certificate Programs:** The Program of Graduate and Continuing Education offers seven Certificate Programs:

Accounting
Advertising
Computer Science
Investments and
Financial Planning

Media Studies
Paralegal Studies
Retail Management





Tillinghast Hall (in this building are the Admissions Office, Financial Aid office, and faculty offices)

Our Mission

First and foremost, Bridgewater State College offers its students a quality education, made possible by an excellent faculty dedicated to teaching, advanced facilities and resources for learning, and a concern for the welfare and well-being of the individual student.

In addition, Bridgewater State College offers a variety of student life activities rich in depth and scope. There are more than 70 student clubs and organizations here, and some 60 intercollegiate and intramural athletic teams that help round out the collegiate experience.

This is a community of people sharing their talents and energy, a warm and caring environment which reflects our philosophy that college years can be, and should be, years of adventure and happiness, full of fresh ideas and positive achievements.

The College has always had high expectations of its students. They, in turn, have high expectations of Bridgewater.

Bridgewater State College from its beginning has been dedicated to the tradition of excellence and public service. Its goal has been to provide access to higher education for qualified students without regard to social or economic circumstances in order to enable them:

- (1.) To know themselves so that they can discover their aptitudes, develop their interests, and build a sound value system;
- (2.) To formulate and articulate their thoughts clearly and precisely;
- (3.) To grow intellectually and emotionally through their educational experiences so that they may live full and meaningful personal and professional lives as contributing members of society.

History of the College

In 1839 Bridgewater was one of the first three public colleges incorporated by the Massachusetts Legislature, and the first class of 28 students was welcomed by Principal Nicholas Tillinghast on September 9, 1840.

Daniel Webster, John Quincy Adams, and Horace Mann were among the early staunch supporters of the school, which had been founded to prepare teachers for the public schools of the Commonwealth.

In a real sense, Bridgewater and America have grown up together. When the school opened in 1840 the United States was still a young, struggling nation with vast areas still to be explored and settled. In those early years Bridgewater graduates traveled west along the frontier, establishing schools and colleges.

The first home of Bridgewater State College was in the basement of the Town Hall, where it remained until 1846, when a permanent building was constructed. This was the first building erected in America for the preparation of teachers.



Bridgewater students, 1870

Tillinghast remained principal until 1853, when he was succeeded by an engineer and scientist named Marshall Conant, who remained principal until 1860. In that year Albert G. Boyden, a former student under Tillinghast and an assistant teacher under Conant, was appointed head of the school. He remained in that position for 46 years, to be succeeded by his son, Arthur Clarke Boyden.

The Boyden era spanned a remarkable total of 73 years in the history of the College. During those years the school grew in enrollment, physical facilities, and reputation as an outstanding teacher training institution.

Following the Boyden administrations, each of the succeeding presidents, Dr. Zenos Scott (1933-1937), Dr. John Kelly (1937-1951), and Dr. Clement Maxwell (1952-1962) helped strengthen and enhance the College.

Dr. Adrian Rondileau came to Bridgewater State College in 1962, and the Rondileau years have produced a period of growth unprecedented in the College's long and distinguished history. During the Rondileau administration the student body has grown from less than 1,000 to 5,200, the number of undergraduate majors has climbed from less than a dozen to twenty-seven, the faculty has tripled in number, and a dozen new buildings have been erected. The Program of Graduate and Continuing Education has also expanded significantly, with many new programs.

While maintaining a strong Liberal Arts emphasis and historical strength in Teacher Education, Bridgewater has developed new professional fields of great importance to the State and the Region. Such fields have included Management Science, Aviation Science, Social Work, and Computer Science.



This rock on the College Quadrangle marks the spot where the first building for Teacher Education in America was erected.

The Academic Experience

Introduction

Small classes, a superb faculty, the extensive resources of the Maxwell Library, modern equipment and facilities, and a supportive network of advisers and counselors are the key elements of the academic environment at Bridgewater State College.

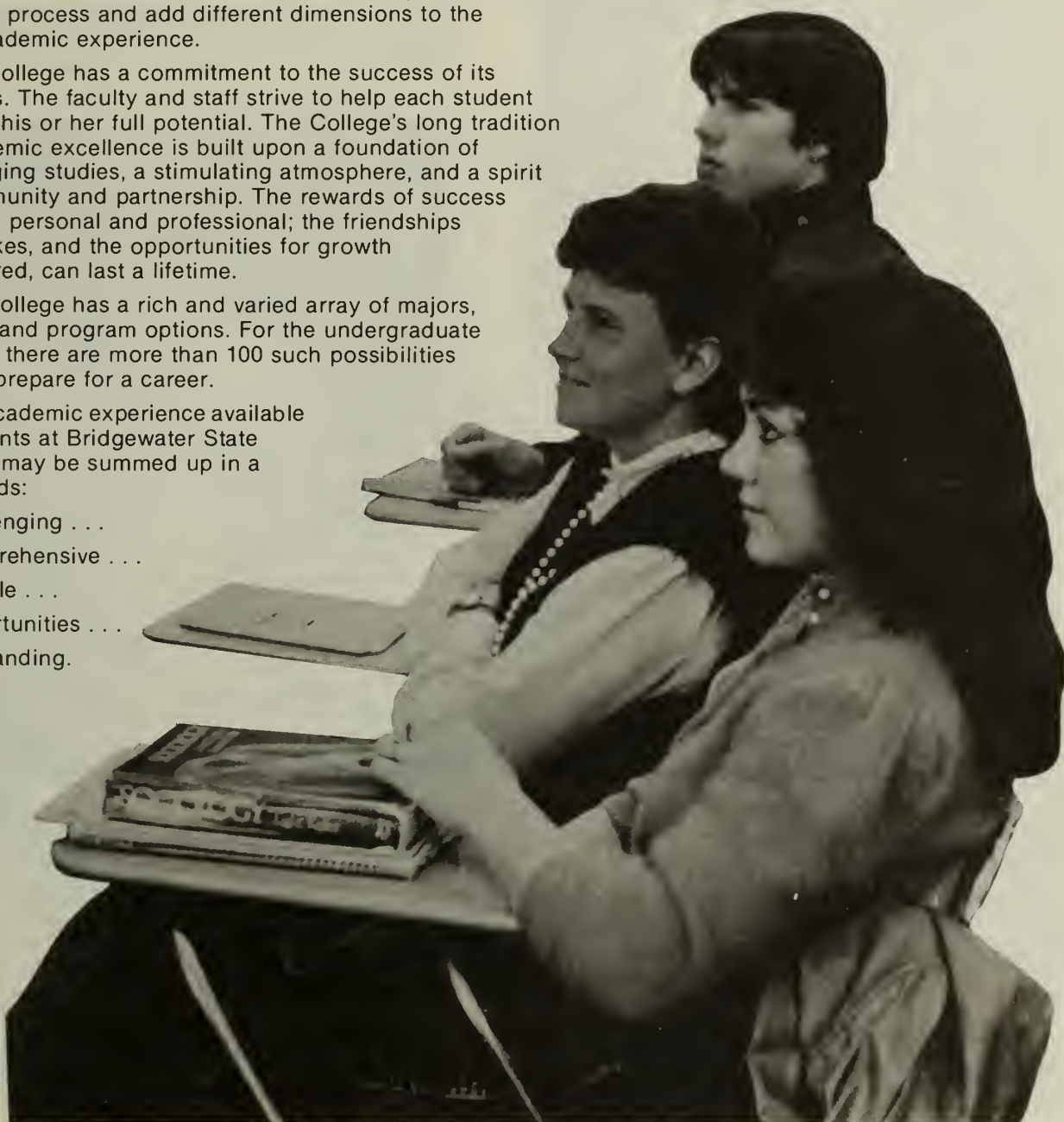
Combined with these are a wide variety of cultural, social, athletic, and recreational activities which complement the learning process and add different dimensions to the total academic experience.

The College has a commitment to the success of its students. The faculty and staff strive to help each student achieve his or her full potential. The College's long tradition of academic excellence is built upon a foundation of challenging studies, a stimulating atmosphere, and a spirit of community and partnership. The rewards of success are both personal and professional; the friendships one makes, and the opportunities for growth discovered, can last a lifetime.

The College has a rich and varied array of majors, minors, and program options. For the undergraduate student, there are more than 100 such possibilities to help prepare for a career.

The academic experience available to students at Bridgewater State College may be summed up in a few words:

- Challenging . . .
- Comprehensive . . .
- Flexible . . .
- Opportunities . . .
- Outstanding.



The Faculty

Bridgewater State College has an outstanding faculty of men and women who take their responsibility for teaching seriously. Because nearly all classes are small (the average class size is less than 30 students), there are ample opportunities for faculty and students to work closely. Many students assist faculty in research projects outside of the classroom as well.

Bridgewater State professors are recognized for their expertise. More than 70% hold earned doctorates and many faculty members serve as consultants and advisors to corporations, banks, health organizations, school systems, and government agencies. Others are leaders in professional societies, conducting pioneering research in their respective fields.



1984 Recipients of "Dr. V. James DiNardo Excellence in Teaching Award" — Dr. Walter Morin, above, of the Department of Biological Sciences, and Professor Joanne Wuschke, right, of the Department of Speech Communication, Theatre Arts, and Communication Disorders, were selected as the 1984 recipients of this prestigious award, which is given annually by the Alumni Association to recognize and honor excellence in teaching among Bridgewater faculty.

Learning Resources

From the resources of the Maxwell Library — with its 200,000 volumes and subscription to 1,500 periodicals — to the educational and cultural resources possessed by each academic department and academic support services, the College's commitment to academic excellence is reinforced by the availability of first-class tools for learning and research, accessible to its students and faculty.

The College has extensive computer facilities for instructional purposes (open seven days a week, from early morning to late at night), and resources that range from a Zeiss Electron Microscope in the Department of Biological Sciences and an Astronomy Observatory in the Department of Earth Sciences and Geography to a Writing Laboratory



offered by the Department of English and the facilities for weaving, ceramics, sculpture, and painting in the Department of Art. These and many other modern resources support the educational mission of the College, and insure that Bridgewater students can learn and apply contemporary knowledge and skills.

Prospective students and their families interested in visiting the College and viewing learning resources are encouraged to contact the Admissions Office for dates of campus visitations.

Orientation for New Students

Orientation for Freshmen and Transfer Students is really an introduction to the complete campus environment — academics, student services, extra-curricular opportunities, and the college itself. Most of our new students attend Orientation in late May or early June.

Orientation is the first activity that most of our new students participate in as members of the College Community, and the program is designed to make them (and their parents as well, who are invited for a day) familiar with the campus and comfortable as members of the community.

Orientation provides the chance to meet with members of the faculty and staff, take tours, enjoy recreational programs, learn about resources such as financial aid, academic advising, and other support services, and get acquainted with other new students. During Orientation new students also register for the courses they will be taking in the next semester, guided in their selection by the advising staff.

The Orientation staff includes approximately thirty "Orientation Leaders" — upperclassmen specially selected for this purpose whose demonstrated

leadership, academic achievement, and involvement in campus life have qualified them to fulfill this important function of welcoming new students.



Below: Orientation Leaders, 1984

Right: Parents on campus tour with Orientation Leaders



The Freshman Center

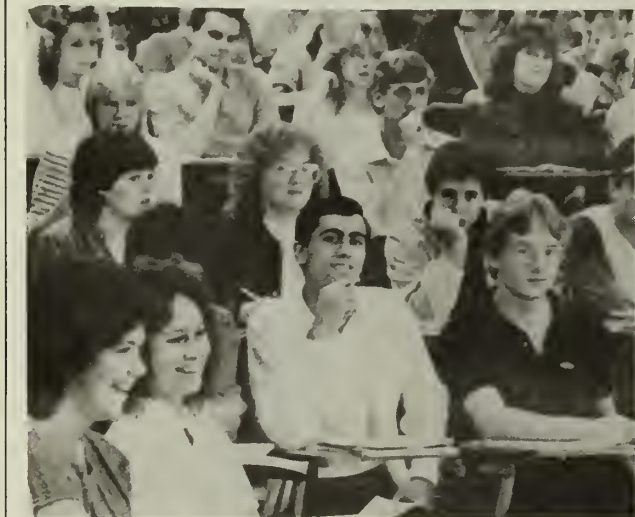
Several years ago Bridgewater State College embarked on a bold new program to help freshmen students adjust to the college environment. The program, which has since drawn considerable comment in professional journals and interest from other schools, is based on our belief that the transition from high school is a complex one, demanding as much individual attention as possible.

Today the Freshman Center is solidly established, occupying a suite of offices in a wing of the Maxwell Library. Volunteers from the full-time faculty, plus administrators experienced in helping freshmen, staff the Center. There is always a professional on hand to deal with problems on an "immediate-need basis."

The Center is a home base for all freshmen throughout their first year of college. During Orientation (see previous column) freshmen are introduced to the Center's staff and are made familiar with the resources there. Once the year begins, every freshmen will make several visits to the Center, where the staff will review his or her progress on an individual basis and suggest special help if necessary. All freshmen students find these conversations beneficial, since the staff is able to answer the questions that arise during the freshman year. During the interviews each student's record is reviewed, discussed, and recommendations for future course selection are shared by the student and the staff.

In cases where a student may be helped by participating in the College's "Enrichment Program," referrals are made by the Center's staff, and located adjacent to the Center are the Reading Laboratory, Writing Laboratory, and Mathematics Laboratory.

Members of the Class of 1988 at Orientation



Enrichment Program

An "Enrichment Program" is available to help strengthen those skills most essential to effective learning both in college and throughout life.

The program is based on the College's commitment to provide students with every opportunity to build upon strengths they have while correcting any deficiencies. This assistance is provided through specialized courses in English, Mathematics, and Reading, and through resources such as the Reading Laboratory, the Writing Laboratory, and the Mathematics Laboratory. Tutorial assistance is also provided.

Students needing assistance in any of these areas may be referred by the College faculty or staff. A student may also request special help, which the College is pleased to provide.



Courses — Students may enroll in the following courses through regular registration procedures.

English 100 — The course will consist of an intensive review of basic communication skills, chiefly those of reading and writing. Students who wish further information about this course should consult with Dr. Clifford Wood of the English Department.

EE 100 Effective Reading — A course dealing with efficient and effective approaches to reading and studying skills at the college level. Students who wish further information about this course should consult with Dr. Peter Bizinkauskas, Reading Laboratory.

continued next page

Enrichment Program (continued)

Laboratories — Students may enroll in the following laboratory programs by consulting with the directors of the program.

Mathematics Laboratory — The Mathematics Laboratory provides individualized instruction in a laboratory setting with peer tutoring and a variety of resources. Student participation in the Mathematics Laboratory may be voluntary or by referral to Professor Jean Prendergast of the Mathematics and Computer Science Department.

Reading Laboratory — The College Reading Laboratory is available to all students who wish to utilize the services of the Laboratory for the development of their own skills. Students interested in the services of the Laboratory may contact Dr. Peter Bizinkauskas, College Reading Laboratory, Maxwell Library.

Writing Laboratory — The Writing Center at Bridgewater State College offers the student an opportunity for individualized instruction in writing. Student participation at the Writing Center may be voluntary or by referral to Dr. Michael Boyd of the English Department.

Honors Program

The general aim of the Honors Program is to encourage students to do more intensive, independent, and creative work. More specifically, its aims are: to encourage superior and interested students to achieve their fullest intellectual potential through critical thinking, scholarship, and research; to help these students improve their skills in oral and written expression; to present an opportunity for frequent and close association of able students for intellectual exchange among themselves and with faculty members, and to create an atmosphere which fosters intellectual, artistic, and academic achievement.

The following departments are at present participating in the Honors Program: Biology, Chemistry, Speech Communication, Theatre Arts, and Communication Disorders, Elementary and Early Childhood Education, English, History, Foreign Languages, Mathematics and Computer Science, and Health, Physical Education, and Recreation. See page 49 for complete details.

Students in all majors are eligible to graduate with Honors (cum laude, magna cum laude, summa cum laude) if their grades meet the requirements stipulated for each category.

The Dean's List is published by the College at the end of each academic year.

May, 1984: Phi Alpha Theta History Honor Society Initiation



Academic Advising

In the Freshman Year, new students work closely with the Freshman Center, meeting regularly with faculty advisors in the Center who help them chart their progress. In the Sophomore, Junior, and Senior years students are assigned an advisor in their major department for this purpose.



Academic advising is an important part of the College's program. Each student is assigned an academic advisor who is a member of the College faculty. The advisor meets frequently with the student to discuss topics such as which courses the student plans to take. If there are any problems or concerns, the advisor can help the student solve them.

Internships

Many academic departments at Bridgewater offer students the opportunity for *internships*. These are usually off-campus in businesses, agencies, schools, hospitals, or other professional settings where students can work side-by-side with experienced professionals, earning academic credit and gaining valuable training and career background.

A student majoring in Computer Science, for example, may intern at a computer firm. A student who is a Communication Arts and Sciences major may intern at an advertising agency or television studio. A Social Work major may intern with a human services agency, a History major at a museum, a Psychology major in a clinic, a Political Science major with a U.S. Congressman or Senator, a Chemistry major with a chemical sciences company, an English major with a publishing firm, and a Management Science major in an accounting, marketing, or financial setting.

Internships are generally available to students in their Junior or Senior Year. This supervised practical experience is explained in detail in the section entitled "Academic Programs" (see page 49). A student pursuing an internship may earn between three and fifteen credits, and this determines the hours one must complete in order to receive credit. For example, a student who elects an internship for three credits is expected to provide evidence of 135 hours of work (a minimum of 45 clock hours for every academic credit) over the course of the semester, according to a schedule agreed to by the company or agency granting the field experience, the student, and the faculty adviser supervising the internship.

Many students have found internships extremely valuable for their professional development. The opportunity to gain extensive, practical experience can often help enhance employment prospects after graduation.

Directed Study

The College encourages students to pursue certain of their interests through Directed Study. Such an undertaking involves independent thinking, hard work, and creativity along with the guidance and help of a faculty member. The end result should be a paper or project accepted by the faculty member working with the student.

For more information on Directed Study, please see page 49 of this Catalogue.



Cultural, Social, Athletic, and Recreational Activities



The College Choral Society performs at the Massachusetts State House in Boston

Introduction

The College has a full social, cultural, athletic, and recreational life. Art exhibits, lectures, concerts, movies, plays, workshops, and sports events fill a busy campus schedule of events each week.

Through the Student Union Lecture Program significant public figures, ranging from authors Kurt Vonnegut and James Baldwin to consumer advocate Ralph Nader and Atlanta Mayor Andrew Young, have appeared at the College. Academic departments often host lecture programs as do student clubs and organizations.

The Student Union, Art Building, and Library all feature galleries where interesting exhibits are on display, and special programs, such as

performances by the College Choral Society or the Creative Dance Group, are enjoyed by the campus community.

If a student enjoys theatre either as a participant (acting, stage work, costumes) or as a member of the audience, Bridgewater has much to offer. Major productions are offered by the Ensemble Theatre throughout the year.

A strong athletic tradition at Bridgewater dates back to the 1850's, and today there are 19 varsity sports and 11 intramural athletic programs (45% of the student body participates in intramural sports).

Students and staff keep abreast of events and programs through the weekly student newspaper, *The Comment*, and the campus radio station, WBIM.

Clubs and Organizations

A number of clubs and organizations exist in a wide variety of interest areas for Bridgewater students. The history of such organizations at Bridgewater is an old one, dating back to the early 1840's. Here is a current listing:

- **Clubs and organizations relating to academics:**

Accounting and Finance Club	Library Science Club
Anthropology Club	Mathematics and Computer Science Club
Arts for All Club	National Student Speech and Hearing Association
Aviation Management Club	Physics Club
Biology Club	Pi Upsilon Pi
Chemistry Club	Political Science Club
Collegiate Alliance for the Study of Human Performance	Pre-Med Club
Communications Club	Psychology Club
Early Childhood Education Club	Slavic/German Club
Earth Sciences and Geography Club	Sociology/Social Work Club
English Club	Spanish Club
French Club	Student Council for Exceptional Children
Health, Physical Education, and Recreation Club	Student National Education Association
History Club	
Law Club	

- **Special interest groups serve the needs of different campus populations. Others serve by helping groups within the College Community:**

Action Center for Women	OASIS (Older than Average Students in School)
Afro-American Society	Sigma Chi
Disabled Student Awareness Organization	Kappa Phi Omega
Epsilon Iota	Social Action Club
International Students Association	

- **For students whose interests lie in the area of music, drama, or debate, a number of organizations may be of interest:**

Americana Singers	WBIM (College radio station)
Bridgewater Arts Review	Ensemble Theatre
Chamber Singers	Forensic Society
The College Yearbook	Stage Band
<i>The Comment</i> (student newspaper)	

- **For those more athletically inclined, besides the activities on the intercollegiate and intramural levels, activities such as synchronized swimming, horseback riding, bowling, bicycle trips, ski trips, water polo, flag football, street hockey, basketball, volleyball, and many other activities are sponsored by the following organizations:**

Aquabryte Synchronized Swimming Club	Creative Dance Group
Bridgewater Association for Intramurals, Recreation, and Sports	Equestrian Club
	Shoto-Kan Karate Club

The brothers of Sigma Chi, 1984



Religious Facilities

The Catholic Center on campus, the Christian Fellowship Center, and numerous area churches and synagogues minister to the religious needs of the College's student body. Many students are active participants in the many programs organized each week at the Catholic Center, while others take part in the Menorah Club, Christian Fellowship, and Chi Alpha.

Varsity Sports

Bridgewater State College currently fields 19 intercollegiate varsity sports teams. The College is a member of the National Collegiate Athletic Association (NCAA) Division III, and a member of the Eastern Collegiate Athletic Conference (ECAC). The football team is in the New England Football Conference.

The following are the current varsity athletic teams which compete for Bridgewater:

Football	Women's Gymnastics
Field Hockey	Wrestling
Cross-Country (Men)	Men's Swimming
Cross-Country (Women)	Women's Swimming
Men's Tennis (fall and spring)	Baseball
Women's Tennis	Softball
Men's Soccer	Track and Field (Men and Women)
Women's Volleyball	Lacrosse
Women's Basketball	
Men's Basketball	



The 1984 Women's Basketball Team compiled a 22-5 record, and for ten weeks was ranked No. 1 in New England and No. 4 in the United States.



Intramural Program

The intramural program at Bridgewater is popular with many students -- approximately 45% of the student body participates in one or more of the 11 sports that are offered:

Flag Football (Men)	Basketball (Women)
Flag Football (Women)	Indoor Soccer (Coed)
Volleyball (Men)	Softball (Coed)
Volleyball (Women)	Softball (Men)
Volleyball (Coed)	Street Hockey (Men)
Basketball (Men)	



Student Union

The Student Union is the focus on campus for a large variety of cultural, social, educational, and recreational programs. From concerts to lectures, movies to plays, folk singers to art exhibits, and dances to minicourses, the Student Union makes a continuing, substantial contribution to the learning environment and enriches the scope and depth of college life.

The Student Union is open from early morning to late at night, seven days a week, during the academic year, providing 27 types of facilities, including student organization offices, radio station, television studio, study lounges, game room, music room, ballroom, and many other facilities.

The Student Union Board of Governors is comprised of 23 members of the College Community who work with the Director of the Student Union to develop policies for the use of the complex, and the major subcommittee of the Board is the Program Committee, comprised of 24 student members who develop, plan, and implement the many events and programs the Union offers.



A photograph of the Student Union and a profile of its physical features may be found on page 31 of this Catalogue.

Services to Students

Introduction

Throughout a college career students are faced with numerous options which involve making adjustments, wise decisions, and intelligent plans. One may have questions and concerns about topics such as housing, finances, health, part-time work, academic programs, post-college study, or career goals.

These and similar important questions are explored by students working with our staff of dedicated professionals involved in the major areas of student development. A wide range of activities is provided to complement and personalize the academic experience for each student.



The Division of Student Services provides specific assistance in areas such as career counseling, housing, finances, health, social activities, part-time work, and the choices students face after graduation. A primary function of the Student Services staff is counseling with students.

In this section, we introduce you to the key services which are available to Bridgewater students:

Career Planning and Placement

The services of the Career Planning and Placement Office, located in the Student Union Building, are available to all matriculated (i.e., officially admitted) students and alumni. Notices of full-time and part-time employment are maintained and a staff of career counseling professionals is on duty to interview students, discuss career options, offer aptitude and interest tests, and advise students.

Specifically, the Career Planning and Placement Office helps students with information about a wide range of career opportunities, and has available an extensive library of career materials, including information about graduate and professional schools.

Freshman students are encouraged to visit the Office, become acquainted with its services, and begin to utilize the resources available early in their college careers.

Counseling Center

A counseling psychologist works within the Office of Student Services, since the personal, academic, and social adjustment of each student is a major concern of Bridgewater State College. The Counseling Center serves the College Community by providing professional counseling, testing, consultation, and research services. In all consultations, priority is given to:

- (1.) Providing professional assistance to students having difficulty coping with academic, vocational, personal, or emotional problems;
- (2.) Protecting the privacy and confidentiality of all consultations with students.

Handicapped Students

The Office for the Handicapped provides diversified services to assist the needs of handicapped students. The Office tries in all possible ways to make the educational experience of handicapped students both academically and personally fulfilling.

The Office offers assistance in locating readers, notetakers, and interpreters, as well as accessible housing. Braille signs are located in Boyden Hall and in all campus elevators. The Office also acts as an intermediary between handicapped students and the College faculty and staff.

Health Services

The Health Services Office is the medical care center of the College. A broad range of specialty clinics, 24-hour medical services, and routine laboratory procedures are included among the benefits which students derive from the Health Services fee. Treatment may be received on a walk-in basis or an appointment. A physician is on duty during scheduled hours and registered nurses are on duty around the clock. A gynecological clinic is held every other Tuesday and an orthopedic clinic is conducted once a month. Laboratory service providing most necessary tests is available free of charge to all students (*Please note: all undergraduate students are required to have a record of complete entrance physical examination on file*).

Insurance

The Student Health/Accident Insurance Plan provides 24-hour coverage anywhere in the world for the 12-month period beginning September 1st. This plan is optional for all Bridgewater State College students. Detailed information on the College plan is available from the College Health Service.

The College does not carry insurance which will compensate students for losses suffered on campus because of fire, theft, water damage, etc. It is advisable to check the extent of current home insurance or to seek coverage through a special policy.

International Students

Information for all foreign students is available at the International Student Center in the Office of Student Services. From the Center students are able to obtain information and assistance regarding immigration, housing, employment, and other matters related to their foreign-student status.

All foreign students applying for admission to the College must file a preliminary application with the International Student Advisor, indicating their educational background. If it is deemed the student may be eligible for admission, the student will be asked to submit credentials. Students for whom English is a second language must submit the results of the "Test of English as a Foreign Language" (TOEFL).

International students should begin the application procedure no less than nine (9) months in advance of the expected date of admission. All correspondence should be addressed to:

International Student Advisor
Office of Student Services
Bridgewater State College
Bridgewater, Massachusetts 02324
USA



International Students at College's Heritage Day Parade

Veterans Affairs

The Veterans Affairs Office provides services in the areas of general information on current Veterans Administration educational assistance, counseling, educational guidance, and assistance in work-study opportunities.

Those students who may be eligible for educational benefits include: Vietnam and post-Vietnam era veterans who have 10 years from the date of discharge from active duty in which to use their educational assistance, and those who have 20 years from their date of discharge from active duty in which to use their Massachusetts tuition exemption; orphans, wives, widows, and widowers of veterans whose premature death or permanent total disabilities were service connected; wives and children of service persons missing in action or prisoners of war for more than 90 days.

Bridgewater State College Transit System

The Bridgewater State College Transit System provides no fare campus shuttle service from 7:00 a.m. to midnight as well as connecting service to Brockton throughout the academic year. The campus shuttle runs approximately every 20 minutes and provides students with comfortable transportation around our 170-acre campus, linking residence halls, academic buildings, and resources such as the Student Union and the Library.

The Bridgewater State College Transit System, inaugurated in January, 1984, with the cooperation and assistance of the Brockton Area Transit (BAT) corporation, has been a welcome addition to the spacious campus. It is one of the most extensive transportation services among New England colleges and universities.





The faculty and senior class, 1868

Campus Life

Introduction

What are the special characteristics of campus life that truly distinguish Bridgewater State College? There are literally hundreds of interesting programs, projects, and events underway at the College throughout each year. This section presents a brief overview of some of these, which together impart a sense of a vibrant campus, an active student body and faculty, and Bridgewater's twin commitment to academic excellence and public service.

On the following pages we are pleased to share with you these selected samples of academic, cultural, and social activities and programs, for they reflect the continuing traditions of which we are most proud.

Cynthia Skowrya, President of the Class of 1984, receives congratulations from President Rondileau at Honors Day, held in May. Ms. Skowrya was the 1984 recipient of the S. Elizabeth Pope Award as the outstanding woman in her class, and an Alumni Leadership Award.



Special note: The following selected events, projects, and programs are presented in alphabetical order. These are intended to be a representative sampling of the many different activities and programs which are sponsored each year by the students, faculty, staff, and alumni of the College.

Alumni Day

Each year in May the Alumni Association, founded in 1842, celebrates Alumni Day and invites graduates back to share a day of reunions and other special events on campus. A highlight of Alumni Day ceremonies is the presentation of Alumni Leadership Awards to outstanding student leaders and scholarships (in 1984, more than \$20,000.00 in scholarships) to academically talented and deserving Bridgewater students.



Dean Martha Jones presents scholarships on Alumni Day

Archaeological Excavations

The Department of Sociology and Anthropology conducts a vigorous archaeology program with field excavations of prehistoric and historic sites throughout New England. An excavation is currently in progress in the North River area and previous excavations have taken place in Plymouth and in Taunton, where important finds were discovered. Both undergraduate and graduate students participate in these field surveys.

Bilingual Special Education Training Grant

The Bilingual Special Education Grant has provided the opportunity to work more closely with bilingual educational leaders of the various towns and cities of Southeastern Massachusetts. The grant provides the support to train 25 teachers from areas of Fall River, New Bedford, Brockton, and major

regional communities to develop Bilingual Special Education Programs in these communities.

Canadian Studies

Bridgewater State College has one of the strongest Canadian Studies programs in the Northeast. The program is interdisciplinary in nature -- involving academic departments of English, History, Music, Foreign Languages, Education, and Earth Sciences. The College has a reciprocal relationship with Canadian universities and students from Bridgewater and from Laval University in Quebec have attended each other's school. Because of the College's expertise in Canadian Studies, the Government of Canada has recognized Bridgewater as an official repository of Canadian government documents.

Children's Physical Developmental Clinic

The Children's Physical Developmental Clinic is a unique program designed to serve children and youth with special needs. The Clinic is for children and youth, 18 months through 21 years, and is the only program of its kind in New England. Ninety children with special needs participate in two sessions of eight weeks each. The program seeks to improve the physical and motor development, and build self-esteem, of the children. Undergraduate and graduate students of different academic disciplines serve as clinicians, working with the children on a one-to-one basis.



Children's Theatre

Since its founding in 1969, the renowned Children's Theatre of Bridgewater State College has been seen and enjoyed by more than 120,000 area children, most of whom are seeing live theatre for the first time. That in fact is the idea behind the Children's Theatre — to introduce young people to the thrill and excitement of the stage. The plays are carefully selected (some are original compositions) to capture the interest and imagination of children. The Children's Theatre is one key aspect of an energetic theatre program at the College.

Commencement



Commencement is the close of the academic year, a colorful event mixing happiness with nostalgia, a celebration of a conclusion and the beginning of a new adventure for the graduates. At Commencement each year awards are announced, diplomas presented, and proud family members share in the happiness of the graduates.

Convocation

Convocation is the formal opening of the Academic Year and takes place in mid-September. Faculty and members of the Senior Class don academic robes for a colorful procession to the

ceremonies, and it is customary to invite an outstanding graduate of the College to return to deliver the Convocation Address.

Firefighter Fitness Center

The Health, Physical Education, and Recreation Department is a leader in establishing quality fitness programs for firefighters in Massachusetts. Undergraduate and graduate students and faculty have been working for several years in this area, funded by state grants, and have established major outreach programs in communities such as Fall River and New Bedford. The College's "Human Performance Laboratory," where cardiovascular studies are conducted, is the center for this project.

Heritage Week

In early May of each year the College celebrates "Heritage Week," an opportunity to reflect on the school's long history and its contributions to our state and nation. The "Heritage Day Parade" — the largest college parade in New England, we're told — is a highlight of the week. Clubs, organizations, athletic teams, and residence halls each enter floats in the parade and compete for trophies. The parade also usually features a large contingent of antique cars, marching bands, and even an aerial exhibition by the Aviation Science fraternity, Phi Beta Sigma.

Heritage Week also features historical exhibits, lectures, and a triathlon athletic competition.



The annual Heritage Day Parade features 3,000 marchers

Homecoming

Homecoming Weekend is a major event each October, a time when large numbers of alumni return to the campus and join with current students to attend the annual Homecoming Football Game

continued next page

and many other activities which take place beginning on the Friday evening before the game. Besides the annual autumn football contest which highlights Homecoming, there are concerts, dinners, a parade, and other special events.

Honors Day

Honors Day is a significant event as each academic year draws to a close. Usually held on a Sunday in May, with the President of the College presiding, parents and family members are invited to come and participate in this special occasion, where students receive awards and scholarships for academic achievement and leadership in student life.

Management Science and Technology Council

The Management Science and Technology Council is comprised of leading business and public figures who meet regularly at the College to offer their expertise, advice, and experience on matters related to the College's major in Management Science. The Management Science and Technology Council includes presidents and senior officers of banks, corporations, and industries who meet with College students, faculty, and administrators to review the Management Science program (see p. 180).

*Mr. Stanton Davis, Chairman, Shaw's Supermarkets,
Member, Management Science & Technology Council.*



Minority Awareness Day



To help acquaint minority students with educational opportunities at Bridgewater State College, the Office of Affirmative Action/Minority Affairs in cooperation with the Admissions Office hosts a "Minority Awareness Day" each year. Minority students from throughout Southeastern Massachusetts are invited to spend a day on campus meeting with students and faculty and participating in special information sessions to learn more about Bridgewater.

New Bedford Harbor P.C.B. Study

The Department of Earth Sciences and Geography has been conducting important studies of the sedimentation depth and pattern of disposal of P.C.B.'s in New Bedford Harbor. With a grant from the Pappas Foundation, Dr. Jacek Sulanowski is working collaboratively with the Woods Hole Oceanographic Institute to conduct this investigation.

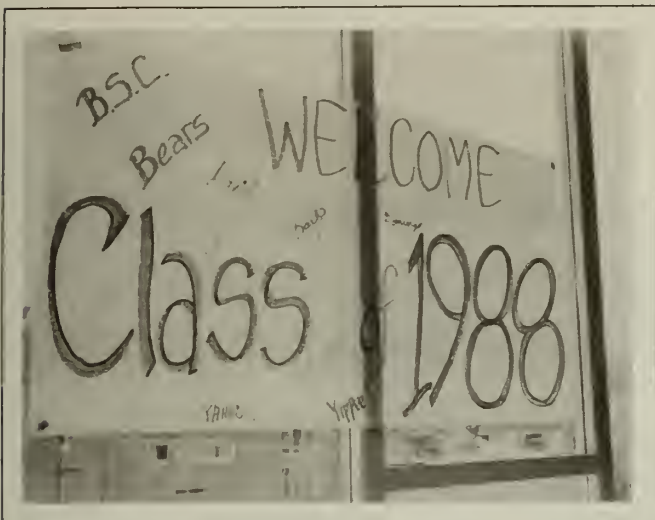
Cooperative Nursing Program

Bridgewater State College and Brockton Hospital School of Nursing work closely together in a cooperative program. School of Nursing students take a full year's academic study at Bridgewater.

Open House

Open House is held each year in the fall (late October or early November) for prospective students and their families. The Admissions Office plans the Open House and members of the faculty are on hand to meet with students and their families to discuss various academic programs. The Open House also features informational sessions on topics such as financial aid and admissions.

Orientation for New Students



Orientation for freshmen and transfer students is designed to help familiarize new students with the campus community. The orientation program includes meetings with students and faculty, recreational activities, academic advising sessions, tours, and other activities. Parents are also invited to participate in Orientation, as we consider them an important part of our community. The orientation program has received enthusiastic reviews from new students, who feel it makes them comfortable with the College before classes begin in the fall, and the adjustment to a new setting is therefore much easier.

Parents Weekend

Parents Weekend is held each year for the parents and family members of undergraduate students. A full weekend of activities is planned each year to give parents and family members an opportunity to meet with faculty and administrators, attend information seminars and panel discussions, enjoy exhibits and a play, and take tours of the academic, athletic, and cultural facilities of the campus.

Presidential Luncheons for Students

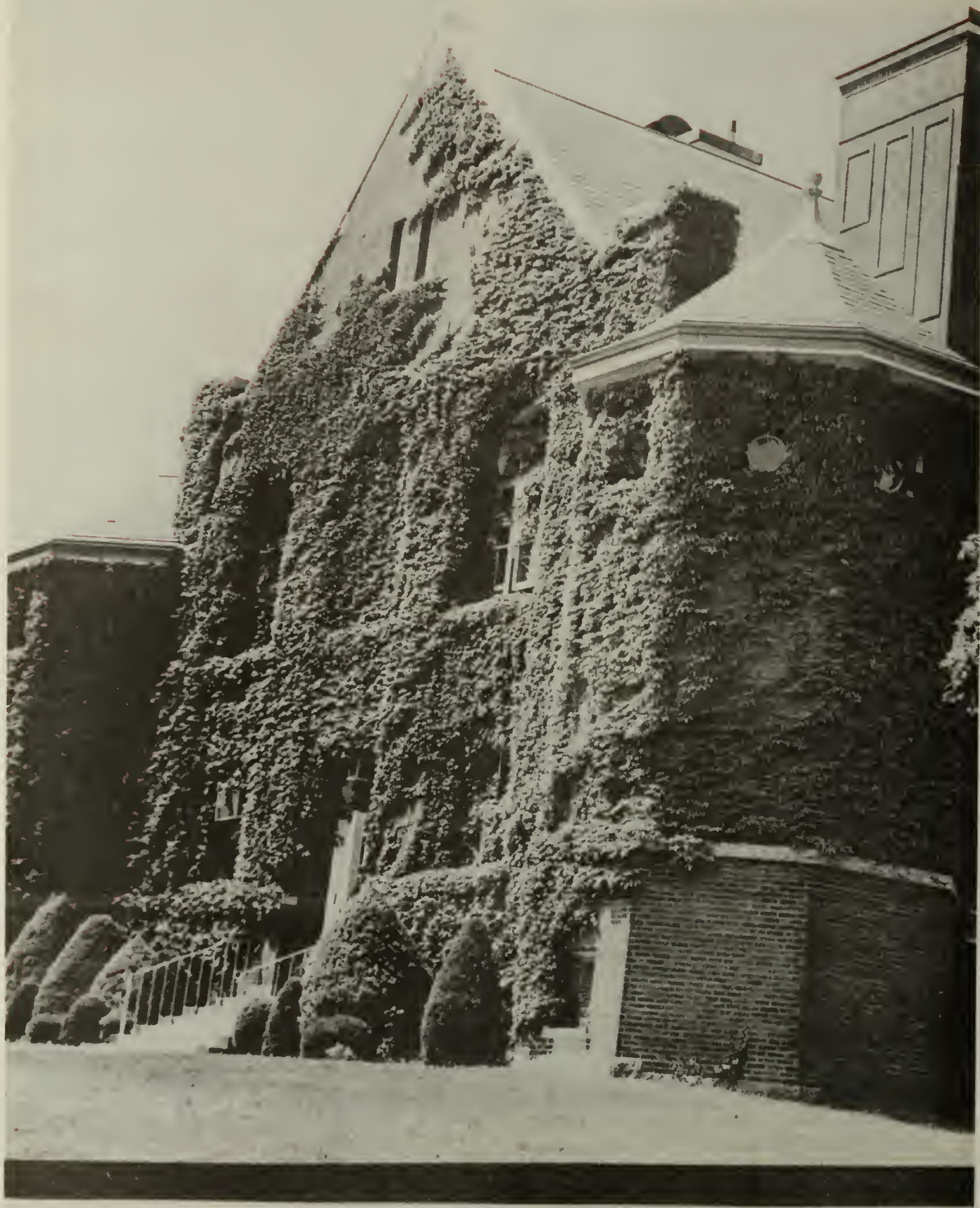
College President Dr. Adrian Rondileau hosts regular luncheons for small groups of students with members of the faculty and administration in an effort to encourage communication within the College Community.

Approximately 30 students are the President's guests at each luncheon, and a question-and-answer period follows lunch. Students are asked to share their perceptions and experiences with the President, faculty, and staff.

The Presidential Luncheons for Students provide special and pleasant opportunities for participants to exchange ideas and suggestions about a wide range of topics of general interest to the well-being of the College.



At a recent luncheon hosted by President Rondileau the members of the Class of 1987 with the highest academic averages were his guests



Art and General Classroom Building

The Campus of Bridgewater State College



—Boyden Hall—

The Campus

Visitors to the Bridgewater campus frequently comment on its scenic beauty. 26 red brick buildings give the campus a distinctively colonial flavor, and spacious green lawns complemented by tree-lined paths are among the College's most attractive physical features.

The 26 academic and residential campus buildings include the following:

□ **Boyden Hall** was constructed in 1926 and recently renovated and reconstructed. This handsome building houses administrative offices and classrooms. The building is named for Albert Gardner Boyden (Principal 1860-1906) and his son Arthur Clarke Boyden (Principal (1906-1931, President 1931-1932). A bronze tablet inside the building

is inscribed with these words: "*They gave their hearts, their minds, and their lives to this school.*"

□ The **Clement C. Maxwell Library** is a modern four-story building with the capacity to house 425,000 books and accommodate 2,500 people. It is named for Dr. Clement C. Maxwell, President from 1952 to 1962, who believed that a library "is the heart of a college."

The Library now has more than 200,000 volumes and subscribes to 1,500 periodicals and newspapers. These are supplemented by microfilm and microfiche holdings, including *ERIC*, a nationwide pooling of information on education and allied social sciences, and *HRAF* (Human Relations Area Files), a collection of primary source materials on selected cultures and societies representing all major areas of the world.

Special collections include an extensive children's collection; the Theodore Roosevelt and Horatio Alger collections (both donated by Dr. Jordan Fiore, Professor of History); a 20,000 volume "Library of American Civilization" and a 6,000 volume "Library of English Literature," both on ultra-microfiche; a collection of books by Bridgewater authors; a Charles Dickens' collection; and a collection of early American textbooks. The Library also has an extensive collection of Lincolniana and is a depository for Canadian government documents.

A curriculum center for teachers in training and in the field offers a large sampling of texts and allied materials. There is also an extensive collection of young adults' and children's books.

In addition to classrooms and seminar rooms, the Library has a small auditorium, a media center, and many individual study areas.

The College participates in a special interlibrary loan service including Bridgewater, Wheaton College, Southeastern Massachusetts University, Stonehill College, Taunton Public Library, Brockton Public Library, and the Veterans Administration Hospital Library.

An outstanding feature of the Maxwell Library is its constantly changing exhibits, reflecting many facets of contemporary and historical interest.

Periodic lectures, musical programs, and art exhibits are scheduled in the Library.

□ The **Art and General Classroom Building** is the oldest existing campus structure, built in 1906 as a gymnasium. Through the years its has also served as a library and office building. Today, following extensive renovation, it houses art facilities, including studios for painting and sculpture and facilities for weaving, silk screening, ceramics, and metal work.

□ The **John J. Kelly Gymnasium** was built in 1957. It houses athletic and recreational facilities, including a large and small gym, an olympic-size swimming pool, a weight room, faculty offices, and classrooms. The Human Performance Laboratory, where extensive cardiovascular research is carried on, is also located in this building.

□ The **Marshall Conant Science Building** was opened in 1964, and is named for the school's second principal. The Science Building houses classrooms, laboratories, a lecture hall, and a host of modern equipment, including a Zeiss Electron Microscope.

□ The **Martha Burnell Campus School** is the College's newest complex. The one-story campus school wing has 13 classrooms plus a music room, art room, gymnasium, solar greenhouse, cafeteria,



Maxwell Library



— Student Union Building —

and library. Approximately 385 students in grades K-6 attend the Campus School. Adjoining this is the three-story **Burrill Avenue Academic Classroom Complex**, where College classrooms and faculty offices for several academic divisions are located.

□ The **Student Union Building** is the “living room” of the campus, a multi-million dollar structure that features a three-story main building with offices for student organizations, a rathskeller, television studio, radio station, ballroom, music lounge, study areas, dining room, plus other facilities, and adjoining complexes of a 1,450 seat auditorium (with theatre production facilities that surpass many professional theatres) and a 900-seat cafeteria.

The Student Union contributes to the educational, cultural, and social experiences of students by providing them with an opportunity to participate in such diverse activities as minicourses, concerts, drama workshops, movies, lectures, and other programs.

□ **Tillinghast Hall** was built in 1916 and was formerly a residence hall. Today the Admissions Office, Financial Aid Office, and faculty offices are located here, as well as a large dining hall for resident students.

□ The **Edward C. Swenson Athletic Fields** are used by a variety of student athletic teams. The football field is surrounded by a running track and there are also fields for baseball, softball, and soccer.

□ The **Catholic Center** was built in 1965 by the Archdiocese of Boston. The Protestant Christian Fellowship and the Menorah Club have space reserved in the Student Union Building.

□ The **Greenhouse and Stearns/McNamara Memorial Garden** are located beside Pope Hall, a student residence hall. The greenhouse was built in 1911 and the memorial garden is a living laboratory of botanical studies.

□ **Five residence halls and one student apartment complex** comprise the residential living accommodations at Bridgewater. The next section, “Housing,” has complete information.

Housing

Residential Living

Approximately 1,350 students live on campus. The five residence halls, and one student apartment complex, comprise the on-campus housing facilities:

□ **Shea Hall**, named for former Dean of Students Dr. Ellen M. Shea, and **Durgin Hall**, named for Professor Emeritus Dr. George Durgin, each accommodates 300 students. The two residence halls share a common entrance and main lobby, and a dining hall.

□ **Scott Hall** is named for former President Zenos Scott, and houses 140 students.

□ **Woodward Hall**, named for Eliza Bond Woodward, class of 1857, who was the first female member of the school's faculty (1857 to 1887). It has 85 double, triple, and quad rooms, and accommodates approximately 240 women.

□ **Pope Hall**, named for former Dean of Women S. Elizabeth Pope, houses 160 women.

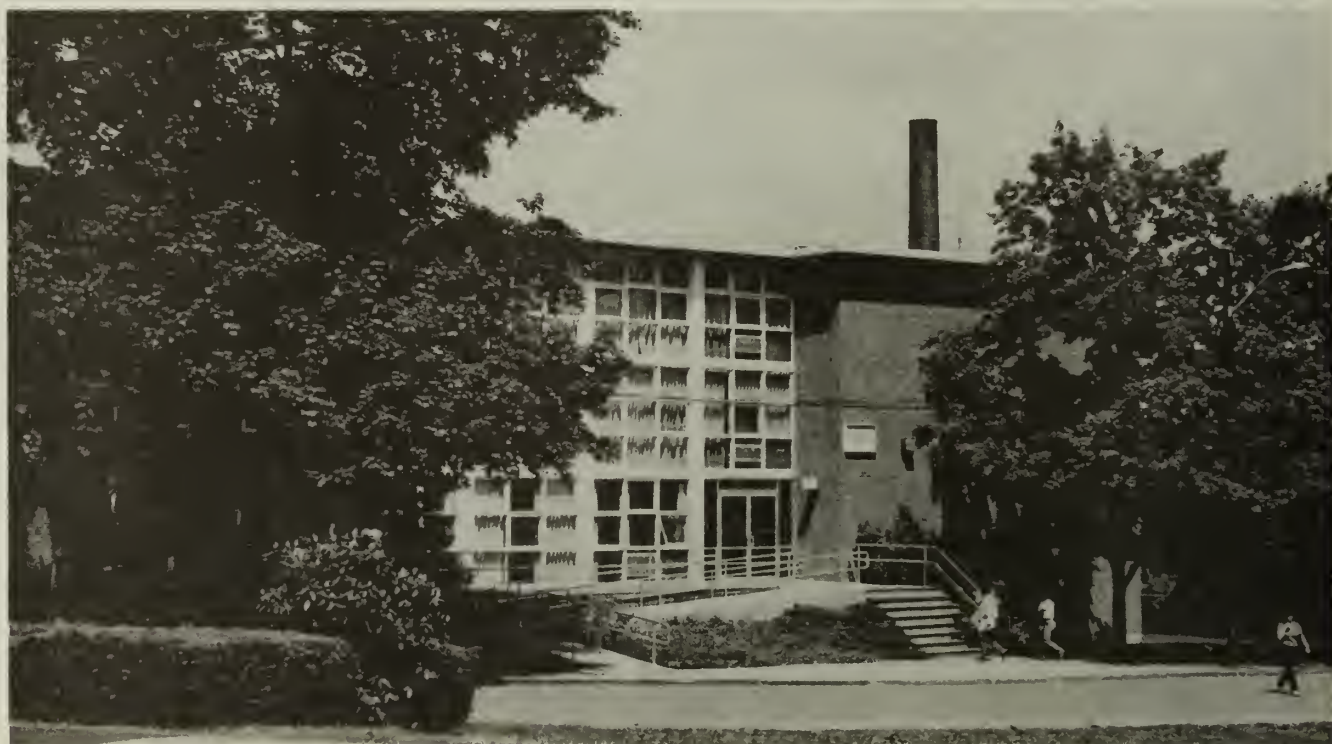
□ **Great Hill Student Apartments**, an apartment complex located near Shea Hall and Durgin Hall, houses 192 students. Each apartment has four single rooms and one double room, a common living area, and complete kitchen facilities.

Requests for residence hall space for incoming students (either freshmen or transfer) are made directly to the Admissions Office.

At present, applications for residence hall placement exceed the openings generally available, and assignments are based on the total evaluation of the candidate, including the distance from one's permanent place of residence, academic standing, and acceptance of residence hall policy. Students who are not immediately granted residence are placed on a waiting list, and further placements are made from this list.

Although the College does not have housing facilities for married couples, marital status as such is not considered a factor in the assignment of a room to any individual student in a residence hall.

continued next page



Pope Hall



Student Apartments

On-campus housing is not available for graduate students, although a small number of rooms are reserved for Resident Assistant Supervisors.

Each applicant for a residence hall reservation must pay a room deposit of \$50.00 following notification of acceptance to a residence hall. This deposit will be deducted from the total second semester residence hall fee of students who attend and will be forfeited by those who do not enroll. Students who enroll for residence and then decide to commute will also forfeit their deposit.

Students who are assigned to residences are required to pay a \$50.00 "Residence Hall Security Deposit." Damages specifically attributed to an individual student or an identifiable group of students are billed at the time of the assessment of damages. General and assessable damages are prorated and paid for from the students' security deposits. Unused deposits are refunded at the end of the academic year.

are not compiled for mailing, since availability changes so frequently. Students are responsible for contacting and making arrangements for off-campus housing, and are urged to register their local address with the Office of Student Services.



Woodward Hall

Off-Campus Housing

Private homes, rooming houses, and apartments provide substantial additional accommodations for students within the vicinity of the College. Off-campus housing information can be obtained in the Office of Student Services. Listings of available accommodations are maintained in this office, but

The Program of Graduate and Continuing Education



The Program of Graduate and Continuing Education offers late afternoon, evening, and weekend courses during the fall and spring semesters plus morning and evening courses during two consecutive summer sessions.

Part-time and full-time courses are offered for undergraduate or graduate credit or for personal enrichment. Each semester approximately 300 courses are scheduled. In addition to courses offered at Bridgewater State College, there are a number of off-campus locations as well (consult the Program of Graduate and Continuing Education brochure).

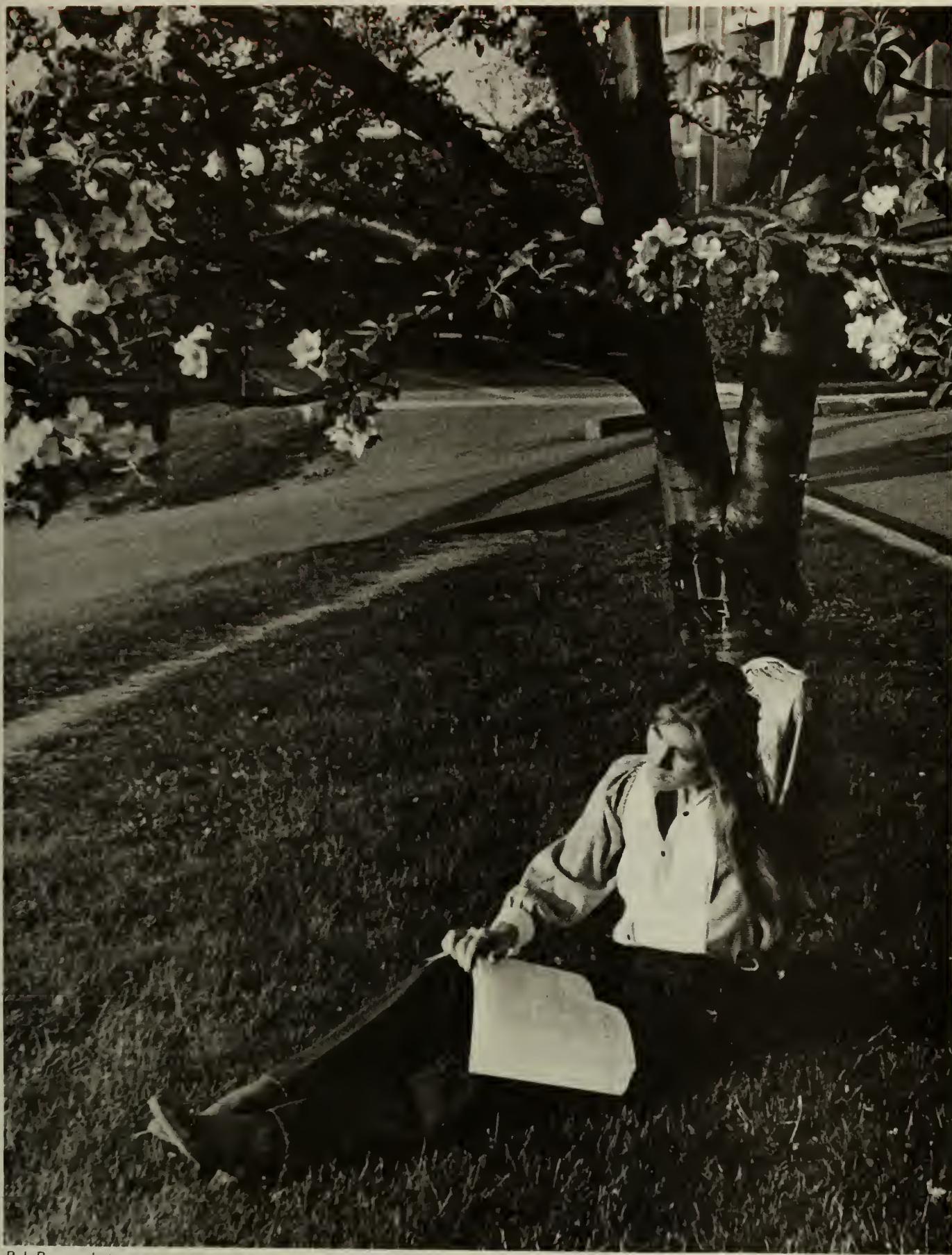
Registration is open to all interested persons, either in advance by mail or by attending "walk-in registration" periods.

Students enrolled in the Program of Graduate and Continuing Education may study for a bachelor's degree, a master's degree, a Certificate of Advanced Graduate Study (CAGS) or one of seven Certificate Programs: Accounting, Advertising, Computer Science, Investments and Financial Planning, Media Studies, Paralegal Studies, or Retail Management.

The staff of the Program of Graduate and Continuing Education includes counselors with experience in assisting students select courses and programs that best meet their goals and interests. For information about the Program of Graduate and Continuing Education, please call (617) 697-1264.

The Program of Graduate and Continuing Education brochure is published three times a year: fall, spring, and summer. In order to obtain a copy, call the Continuing Education Office at (617) 697-1264 or write to:

Continuing Education Office
Bridgewater State College
Bridgewater, Massachusetts 02324



Rob Berger photo

Admissions

Bridgewater State College seeks to admit students who give evidence of intellectual capacity, motivation, character, and who have a record of scholastic achievement. An effort is made to attract candidates of diverse academic, economic, racial, religious, and geographic backgrounds. It is the objective of the admissions program to select a freshman class from those applicants that can benefit from the programs and services available at the College and can take advantage of the Bridgewater experience.

Bridgewater State College does not discriminate on the basis of race, sex, color, religion, age, or national or ethnic origin. In addition, no otherwise qualified handicapped applicant shall solely, by reason of handicap, be excluded from admission.

Freshman Admissions

Admission to Bridgewater State College is competitive and based on an individual evaluation of each candidate. Freshmen accepted for admission are admitted to the College and not to a particular major. During the second semester of the Freshman year students may declare a major. See the catalogue section entitled "Academic Policies" for additional information.

Freshmen applicants for admission are evaluated on several criteria. The primary emphasis is placed on the overall performance of the applicant in secondary school. Applicants are required to submit a transcript from their high school which should include the grades from the fall quarter of the senior year.

Candidates for admission should complete a secondary school course of study, or equivalent preparation, which is compatible with the goals and objectives of the College. A recommended (required for September, 1986) secondary school program would include:

English (a)	4 units
Mathematics (b)	3 units
Science (c)	2 units
History/Social Science (d)	2 units
Foreign Language** (e)	2 units**
Elective Units (f)	3 units
Related Courses (g)	4 units

**Required for September, 1987 entrance period

- (a) These must be college preparatory courses in composition and literature which include the development of reading, writing and comprehension skills.
- (b) These should be college preparatory courses in such subjects as algebra, geometry, trigonometry, elementary functions and mathematical analysis. A fourth year of mathematics, usually calculus, is strongly recommended for students who plan to enter fields such as computer science, mathematics, pre-engineering or the sciences.

- (c) These college preparatory courses should include laboratory work.
- (d) This requirement should include one year of United States history and government.
- (e) Students are encouraged to elect a third year of foreign language study.
- (f) Students should choose from additional college preparatory courses in English, mathematics, computer science, foreign language, natural and physical science, visual and performing arts, and humanities.
- (g) Students are encouraged to elect courses that are consistent with their personal, educational and career goals. These courses may include, but are certainly not limited to, such offerings as computer science, business, communications, psychology and sociology.

Students graduating from vocational-technical high schools will be considered according to the provisions of the Board of Regents' Admissions Standards dated January 10, 1984.

The College is also careful to consider the characteristics of each candidate's school and community and sets no limit on the number of applicants admitted from an individual secondary school.

Bridgewater State College supports the efforts of secondary school officials and governing bodies to have their schools achieve regional accredited status to provide a reliable assurance of the quality of educational preparation of its applicants for admission.

Candidates for admission to the freshman class must take the Scholastic Aptitude Test (SAT) of the College Entrance Examination Board (the only exceptions are footnoted below**). In addition, candidates should submit the results of the College Board's Student Descriptive Questionnaire (SDQ).

It is advised that students take the Scholastic Aptitude Test (SAT) no later than January of the senior year. Any candidates submitting scores taken during their junior year should have those scores and Student Descriptive Questionnaire (SDQ) reports forwarded during the academic year in which application is made to the College from the College Entrance Examination Board.

***Chapter 344, Section 19 of the 1983 Acts and Resolves of the Commonwealth of Massachusetts states that: "No resident of the Commonwealth who has been diagnosed as being developmentally disabled, including but not limited to, having dyslexia or other specific language disabilities, by any evaluation procedure prescribed by chapter seventy-one B, or equivalent testing, shall be required to take any standardized college entrance aptitude test to gain admittance to any public institution of higher education in the Commonwealth. Admission shall be determined by all other relevant factors excluding standardized achievement testing."*

Admissions

Application for registration for the SAT, as well as score report requests, is made directly to the College Entrance Examination Board, Box 592, Princeton, New Jersey 08540. The College code number for designating score reports to be sent to Bridgewater State College is 3517.

Bridgewater State College recognizes that candidates present a broad variety of experience, backgrounds, interests and abilities. Therefore, other factors considered in the admission decision include demonstrated leadership, participation in extracurricular activities, motivation, maturity, and special aptitudes and talents. While this non-academic profile of a candidate influences a decision, academic preparation is the most important factor in considering any applicant. All letters of recommendation and any additional supporting information an applicant wishes to submit are considered.

Interviews are not required; however, any student wishing a personal interview may contact the Office of Admissions for an appointment.

Commencing with the Freshman Class entering in September, 1984, the Board of Regents of Higher Education has established an admissions eligibility index for students entering the Commonwealth's State Colleges and Universities directly from high school. This eligibility index is a sliding scale which relates scores on the Scholastic Aptitude Test with weighted high school class rank. The following groups are exempt from the Bridgewater State College Admissions Eligibility Index:

1. Candidates that have demonstrated to the Committee on Admissions non-quantitative factor(s) such as special aptitude, talent, initiative and creativity.
2. Students out of high school for three years or more. These students are best evaluated by certain non-quantitative criteria such as maturity and motivation.
3. Students whose special needs have been identified by means of assessments prescribed in Chapter 766. This group is exempt from submitting the results of the Scholastic Aptitude Test (SAT).
4. Educationally disadvantaged students. Typically these students include those who may be culturally different with a primary language other than English, minorities, economically disadvantaged, from rural districts with limited course offerings, or from large urban school districts which are experiencing a net out migration of students. For these students, non-quantitative factors are especially important in evaluations.
5. Students transferring to Bridgewater State College with an associate degree from a Massachusetts Community College.
6. Students transferring to Bridgewater State College with at least 12 semester hours of advanced standing and a grade point average of at least 2.0 on a four point scale.

Note: These eligibility requirements refer only to eligibility for admission to Bridgewater State College and do not guarantee admission.

Early Decision

If Bridgewater State College is your first choice for college study you may apply for early decision. For the applicant, early decision eliminates several months of waiting for an admission decision. A student under the early decision plan must agree to withdraw applications to other colleges if admitted to Bridgewater. This program is only for Freshmen applicants for the Fall Semester.

Application deadline for the early decision plan is November 15, all candidates under the plan are notified of the admission decision by December 15. A non-refundable tuition deposit is due by January 15.

Application Procedure

1. File the Bridgewater State College application form along with a nonrefundable fee of \$18.00 for Massachusetts residents and \$25.00 for out-of-state students prior to April 1. **A candidate desiring residence hall accommodations should submit the application no later than March 1.** Please see the catalogue section entitled *Housing* for additional information on residence halls.
2. Request the secondary school to send the transcript and any letters of recommendation directly to the Director of Admissions. The transcript must include the grades for the first term or semester of the candidate's senior year.
3. The results of the Scholastic Aptitude Test must be forwarded directly from the College Entrance Examination Board. Score report requests should be made directly to the College Entrance Examination Board, Box 592, Princeton, New Jersey 08540.

Transfer Admissions

Bridgewater State College, with its strong emphasis on Transfer Student Programs, welcomes qualified transfer students and encourages those students to make application. The following is an explanation of the procedure for admission and conditions of acceptance:

- A. Transfer candidates will be evaluated for admission on the basis of their previous college academic record. They must arrange with each college they have previously attended for the mailing of an official transcript of any course work attempted. Students with less than one full year of college credit should have their high school transcripts sent.
- B. All candidates must submit a catalogue from the previous college(s). Whenever possible, degree credit will be granted for course work completed at other institutions of higher education. Courses which do not fit the degree program may be counted as fulfilling the free elective requirements of the four-year curriculum. The transfer student will be required to fulfill the same degree requirements as any other

Admissions

student. However, a student who has completed the general education requirements of another Massachusetts State College prior to transferring, will not be obligated to meet additional or different general education requirements at Bridgewater State College.

- C. Honor courses, programs of independent study, Advanced Placement, College Level Examination Program (CLEP) and advanced standing credit earned at other institutions of higher education will be accepted at Bridgewater.
- D. Most transfer students complete at least two academic years at the College, although if all requirements are met satisfactorily, the College will grant a baccalaureate degree with a minimum of one full year of academic work taken at the College provided that all other requirements for graduation have been met.
- E. A student transferring from a two-year institution is entitled to transfer for credit toward the bachelor's degree no more than the two years of credit which constitute the requirements of the Associate Degree Program taken as a unit. Please note that no more than 69 semester hours may be transferred from any two-year institution.
- F. The number of transfers accepted by Bridgewater will be determined by existing vacancies in the various degree programs and the number of applicants determined eligible under the above guidelines. Among qualified and eligible transfer applicants, priority in admissions will be given to transfer students in good standing from within Massachusetts public higher education.

Commonwealth Transfer Compact

Throughout public higher education in the Commonwealth, an associate degree from any community college signatory to the Commonwealth Transfer Compact will be honored as a unit and construed as: (1) completion of at least 60 hours of work toward a baccalaureate degree, and (2) completion of at least 33 credit hours toward fulfillment of the general education requirements for the baccalaureate degree. Further, all associate degree holders accepted for transfer under the Compact will be subject to no special requirements beyond those specified as major department and graduation requirements for students who originally enrolled in the receiving institution as freshmen.

To be eligible, the student must meet the following conditions:

- 1. Be accepted for transfer admission at Bridgewater State College.
- 2. Earn an associate degree from one of the Massachusetts Community Colleges. The associate degree must contain the equivalency of 60 hours of undergraduate college-level study and have the following distribution of credits:

- a. 6 credits of English/communications
- b. 9 credits of behavioral/social sciences
- c. 9 credits of humanities/fine arts
- d. 9 credits of mathematics/sciences
- e. the remaining credits to be on a college level.

Some clarifications to the Compact are:

- 1. Students changing programs may expect that it will require more than four semesters to complete the sequence of a new major.
- 2. Course credit for transfers from programs not conforming to Compact specification will be evaluated by the receiving institution according to the applicability of those courses to the baccalaureate program in the major field of the student.

Readmission

Applications for readmission must be filed by June 1 for first semester readmission and December 1 for second semester readmission. Students who withdrew for low scholarship must arrange an interview with the Director of Admissions.

Special Students

The day session admits, on a semester basis, a number of non-degree students as either full or part-time students. Students seeking admission in this category should contact the Office of Admissions for additional information.

Notification Dates

Bridgewater State College has a "rolling admissions" policy. There is no one date on which the college notifies all applicants simultaneously of their acceptance. Freshmen candidates are notified on a continuing basis over a period of several months, beginning about January 15. Transfer candidates are notified beginning March 1.

If the number of qualified applicants exceeds the number that the facilities of the College will accommodate, a waiting list is established.

Those freshmen candidates who have not met the requirements for admission by March 1 may jeopardize their chances of receiving consideration for acceptance, since the College may close admissions at this time.

Application deadline for the Early Decision Plan is November 15. All candidates under the plan are notified of the admission decision by December 15. A non-refundable tuition deposit is due by January 15. Students should contact the Office of Admissions for details of the program.

Admissions

Special Admissions Programs

The Program for the Recruitment and Retention of Special Students (PROGRESS) was established to admit and provide support services to students from a minority group and/or disadvantaged background who possess both the motivation and potential necessary to achieve a college degree.

The Scholastic Aptitude Test (SAT) should be taken as it is used to assist in the placement and advising of the student. The high school performance of students applying through PROGRESS will be judged on the basis of identifiable achievement patterns over the high school experience rather than on class standing or rank.

Letters of recommendation from guidance counselors, teachers, and in some cases community leaders, are a great assistance in evaluating an applicant's ability to do college-level work.

Each student admitted through PROGRESS is assigned an academic advisor and will be encouraged to carry courses and course loads suitable to individual needs. Students must carry at least nine semester hours, but no more than 15 hours in the freshman year.

Tutorial services are available for all courses. The courses taken by PROGRESS students are the same as those taken by all students at Bridgewater. PROGRESS students must meet the same degree requirements for graduation as do all other students at the College.

Financial assistance is available through the Financial Aid Office. The amount of financial assistance each student will receive is dependent upon individual needs as demonstrated in the standard financial aid application form (Parent's Confidential Statement).

OUTREACH

OUTREACH is a program designed for the recruitment, admission counseling, and tutoring of students who have traditionally had limited access to higher education.

These students would include among others, working adults, homemakers, veterans, minorities, handicapped, and elderly. These prospective students are invited to enroll in either the day school or the Program of Continuing Education as either full or part-time students.

An important aspect of the OUTREACH program is that normal admission requirements may be altered in individual situations. Cognizant that applicants under the OUTREACH program may be presenting varied levels of preparedness, it is suggested that interested applicants contact the Office of Admissions to arrange for a personal interview.

International Admissions

Foreign students who wish to apply for admission to the College should address a letter of inquiry to the Director of Admissions indicating their educational background and intended area of study. Eligible candidates will be mailed a special foreign student admission application and asked to submit official transcripts and credentials.

Students for whom English is a second language will be required to submit their results from the "Test of English as a Foreign Language" (TOEFL). International students should begin the application procedure no less than nine months in advance of the expected date of admission.

Please see the *Services to Students* section of this catalogue for information on the International Student Center and other services available for international students.

Program for Registered Nurses

Provisions have been made for graduates of three-year diploma schools of nursing to complete programs leading to degrees in any of the academic majors being offered at the College.

While encouraging registered nurses to pursue degree work for personal enrichment, the College supports the guidelines of the National League of Nursing for the professional education of nurses. These guidelines caution nurses whose career goals include the opportunity to assume supervisory and/or teaching responsibilities in the field of nursing, that degree programs to be pursued should be taken only at those institutions which offer degrees in Nursing Education.

Through this special admissions program, students accepted to the College are granted 60 credit hours for their school or nursing work. Where applicable, these credits may be used to meet General Education, major, or elective requirements. As with all others transferring into the College, registered nurses are expected to meet the same degree requirements as outlined in the *Academic Policies* section of this catalogue.

New England Regional Student Program

Bridgewater State College participates in the New England Regional Student Program. The Program is administered by the New England Board of Higher Education and is designed to permit qualified New England residents to study with in-state tuition and admission privileges in certain programs at Bridgewater State College.

The program's purpose is to expand higher education opportunities for New England residents by making available on an equal basis those courses not commonly offered at every institution.

Information about the program can be obtained from the Bridgewater State College Admissions Office, from any guidance counselor, or from the New England Board of Higher Education, 45 Temple Place, Boston, Massachusetts 02111.

Admissions

Health

All candidates, regardless of the intended area of study, are required to have a health examination before entrance. Information concerning such examinations is forwarded to prospective students after notification of acceptance. The candidate, if a teacher education program is the intended area of study, must be in good physical and mental health, free from disease, infirmity, or other defect, which would render the candidate unfit for public school teaching.

Advanced Standing

Advanced Standing with college credit and reduction of distributions of the College requirements is granted entering students who have demonstrated college-level proficiency through established procedures.

Advanced Placement Program

The College participates in the College Entrance Examination Board's Advanced Placement Program, through which secondary schools deliberately prepare able, interested students for advanced work at college in the following disciplines: American history, art, biology, chemistry, English, European history, French, German, Latin, mathematics, music, physics, and Spanish. Scores of 3 or above are considered satisfactory by the College and credit is awarded accordingly.

College-Level Examination Program (CLEP)

Bridgewater State College encourages able students to seek advanced standing through one or more of the CLEP examinations described below. Credit is awarded for scores at the 50th percentile or above.

CLEP credit may not be awarded if equivalent course work has been completed either prior to, or later than, the comparable CLEP examination. It is the student's responsibility to consult the current Bridgewater State College catalogue for area or course equivalent distribution of CLEP credits.

Students may arrange to take the CLEP Examination at any of the national test centers, including Bridgewater State College. Those students interested in taking the exams at Bridgewater should contact the Office of Admissions.

There are two types of CLEP (College-Level Examination Program) examinations; the General Examinations and the Subject Examinations. Both measure factual knowledge and understanding, as well as the ability to see relationships and apply basic principles to new problems. The examinations are not based on courses given at Bridgewater State College but on typical courses in a variety of colleges throughout the country.

GENERAL EXAMINATIONS

The College requires all students to complete some study in certain fields that are deemed important for everyone, regardless of special interests or occupational goals. Such required study is called "General Education." The CLEP General Examinations provide a way to show that

you have acquired some general education; the equivalent of what is given in required freshman and sophomore courses at the college.

There are five General Examinations which can be applied toward the General Education Requirements at Bridgewater State as follows:

General Examinations	Credit Allowed	Area of Course Equivalent
English Composition*	3	English Composition I (EN 101)
Mathematics	6	Mathematics (MA 105, 106 or 108)
Natural Sciences (Biology/Physical)	6	Natural Sciences
Humanities (Fine Arts/Literature)	6	Humanities & Creative Arts (AR 110, EN 221)
Social Sciences/History	6	Social Sciences

*(Bridgewater requires a supplementary essay to be taken at the College.)

SUBJECT EXAMINATIONS

The subject examinations now offered are comparable to the final or end-of-course examinations in particular undergraduate courses. A person who has learned the subject through other means such as independent study can probably earn satisfactory scores on the corresponding CLEP examination. The following subject examinations are offered:

Composition and Literature	Credit Allowed	Introductory Macroeconomics 3
American Literature	6	Introductory Microeconomics 3
Analysis and Interpretation of Literature	3	Introductory Sociology 3
College Composition*	6	Western Civilization I: Ancient Near East to 1648 3
English Literature	6	Western Civilization II: 1648 to the Present 3
Freshman English*	6	
Foreign Languages		Science and Mathematics
College French — Levels 1 & 2†	3 to 12	Calculus with Elementary Functions 6
College German — Levels 1 & 2†	3 to 12	College Algebra 3
College Spanish — Levels 1 & 2†	3 to 12	College Algebra-Trigonometry 3
		General Biology 6
		General Chemistry 6
		Trigonometry 3
Behavioral Sciences, Social Sciences, and History		Business
American Government	3	Computers and Data Processing 3
American History I: Early Colonizations to 1877	3	Introduction to Management 3
American History II: 1865 to the Present	3	Introductory Accounting 3
Educational Psychology	3	Introductory Business Law 3
General Psychology	3	Introductory Marketing 3
Human Growth and Development	3	

*Bridgewater requires a supplementary essay to be taken at the College.

†Credit decisions are adjusted on the basis of total score in relation to prior years of study.

Tuition and Fees* — 1984-1985

DAY SESSION

Application and Advance Payment Fees: A non-refundable undergraduate application fee of \$18.00 is required of all in-state applicants and \$25.00 for out-of-state applicants. Upon acceptance, a non-refundable advance payment of \$50.00 must be made. This advance payment is credited against tuition when the student enters the College.

Semester Bill: Students are billed twice a year, prior to the start of each semester. Bills are sent to students at their permanent addresses. Payment **must** be made prior to the due date which will be specified on the bill.

- A. Students who have received an award letter from the Bridgewater State College Financial Aid Office may claim that amount of the award that is specifically designated for the semester. The amount must be indicated on the bill which must be returned by the due date.
- B. Students wishing to claim credit for financial assistance from sources other than from the Bridgewater State College Financial Aid Office (outside scholarships, waivers, loans, etc.) must do so by indicating the amount of the assistance on the bill. Official documentation verifying the assistance must be enclosed with the bill which must be returned by the due date.
- C. MASTERCARD or VISA may be used for any payment, either in full or in part.

Semester Tuition

Residents of Massachusetts (Undergraduate):

Full-time (12 or more credits) —	
per semester	\$450.00**
Part-time — per credit hour	\$39.00

Non-Residents of Massachusetts (Undergraduate):

Full-time (12 or more credits) —	
per semester	\$1488.00
Part-time — per credit hour	\$124.00

Residents of Massachusetts (Graduate):

Full-time	\$516.00
Part-time (per credit hour)	\$43.00

Non-Residents of Massachusetts (Graduate):

Full-time	\$1540.00
Part-time (per credit hour)	\$129.00

Tuition and certain fees are not charged to any person 60 years of age or older.

*All charges are subject to change.

**Subject to possible slight modification

Required Semester Fees

Health Services Fee	\$25.00
Library Fee	\$20.00
Student Government Association Fee	\$18.00
Student Union Building Fee	\$27.50
Athletic Fee	\$30.00
Educational Services Fee	\$30.00
Transportation Fee	\$10.00

Part-time students are charged one-half of the above fees.

Other Fees

Physical Education Facilities Fee	
required of all new students	\$12.00
Placement Fee required of all new students	\$10.00
Student I.D. Card Fee required of all new	
students	\$ 5.00
Residence Hall Security Deposit	\$50.00
Late Registration Fee (non-refundable)	\$25.00
Commencement Fee	\$11.00
Day session underclassmen are billed at \$2.50 a year;	
seniors at \$3.50; transfer students assessed retro-	
actively; all others at time of graduation.	
Student Teaching Fee (in lieu of Educational	
Services Fee)	\$75.00
Student Health Insurance Plan (optional)	
(Family Plans available)	\$114.00
Transcript Charge (Day School - per copy)	\$ 1.00
MASSPIRG (Optional/Waivable) Fee	\$ 3.00

Semester Room and Board

Room — per semester	
Residence Halls	\$515.00
Resident Student Apartments	\$665.00
Board — per semester	
19 meal plan	(Fall, 1984) \$536.00
.....	(Spring, 1985) \$576.00
14 meal plan	(Fall, 1984) \$509.00
.....	(Spring, 1985) \$548.00

Tuition and Fees

Refund Policy

Upon official written notification of withdrawal by the student (to the Registrar's Office), the following refund policy is applicable: **THE DATE AND TIME THAT THE NOTICE IS RECEIVED WILL BE THE OFFICIAL DATE AND TIME OF WITHDRAWAL.**

Tuition and Board

66 2/3% until the end of the first week of classes.

(9/11/84-Fall — 1/22/85-Spring)

50% until the end of the second week of classes.

(9/18/84-Fall — 1/29/85-Spring)

33 1/3% until the end of the third week of classes.

(9/25/84-Fall — 2/5/85-Spring)

After the third week of classes NO refund will be made.

Room

Withdrawal Prior to Occupancy — Residents who wish to withdraw from a residence hall prior to occupancy may obtain a refund on room fees provided written notice of intention to withdraw is given to the Director of Housing no later than thirty (30) days before the commencement of either the fall or the spring semester and the College is able to fill the vacancy created by the resident's withdrawal.

Withdrawal During Term of Agreement — Residents who wish to withdraw from the residence hall during or at the end of a semester may receive a pro-rated refund on room fees *provided* they notify the Director of Housing in writing prior to their withdrawal and the College is able to fill the vacancy created by the resident's withdrawal. Such pro-rated refund shall be determined from the date of occupancy by the resident filling the vacancy. All rooms from which students have withdrawn campus-wide must be occupied before any individual refunds can be made.

Fees

Unless stated otherwise, all fees are non-refundable and must be paid by all students who are in attendance for all or part of the semester.

It is the policy of Bridgewater State College that students or former students at any of the State Colleges who are listed by the financial office of said State College as having unpaid debts for tuition, room, board, medical or other College related charges where said debts have not been discharged by operation of law or where deferred payment of said debts has not been agreed to by said College will not (1) be *issued* any diploma to which said students might otherwise be entitled; (2) be permitted to register for any program at any State College for which said students might otherwise be eligible; and (3) be furnished a certified copy of any State College transcript (unless said transcript is needed to obtain any benefits related to service in the United States armed forces) although said students will be entitled, upon written request, to inspect and review uncertified copies of their transcripts.

PART-TIME STUDENTS

Part-time students are billed on the basis of the number of credits for which they have registered. No tuition refunds are made to part-time students who reduce their course load after classes begin.

PROGRAM OF GRADUATE AND CONTINUING EDUCATION

All tuition and fees are payable in full at the time of registration.

Tuition

Residents of Massachusetts

Undergraduate Credit \$47.00 per credit hour

Graduate Credit \$55.00 per credit hour

Audit (non-credit) \$35.00 per credit hour

Non-Residents of Massachusetts

Undergraduate Credit \$57.00 per credit hour

Graduate Credit \$65.00 per credit hour

Audit (non-credit) \$35.00 per credit hour

Fees

Registration Fee \$40.00

Laboratory/Studio Fees \$5.00-\$50.00

Charged in all laboratory science courses and in a number of studio and practicum courses

Student I.D. Card Fee (new students) \$ 5.00

Late Registration Fee \$10.00

Change of Registration Fee (per course) \$ 2.00

Commencement Fee \$11.00

Transcript Charge (per copy) \$ 2.00

Refund Policy

A student who is entitled to a refund must obtain a form for each course for which a refund is due and file it in the Continuing Education Office. **THE DATE AND TIME THAT THE NOTICE IS RECEIVED WILL BE THE OFFICIAL DATE AND TIME OF WITHDRAWAL.**

Telephone and other unofficial notices will not be accepted as notification of withdrawal.

Tuition

Refunds will be based on the scheduled calendar:

Before the first class meeting 100%

After first meeting but before the second meeting .. 90%

After second meeting but before the third meeting . 50%

After third meeting no refund

Fees

Fees are non-refundable unless the College is responsible for the class cancellation.

Financial Aid

All Bridgewater State College students are encouraged to apply for financial aid in order to meet the cost of their education. Students must be enrolled at least half-time in either an undergraduate or graduate degree program to receive financial assistance from the College. In considering students for financial assistance, the College places emphasis upon financial need. This need is the amount by which the total costs of college attendance, including reasonable costs of transportation, room and board, and other personal expenses, exceeds the expected family contribution. Each eligible student has equal access to the College's financial aid funds based upon the resources of both the parents and student. The aid from the College will be a supplement to the contribution of the family.

To provide a basis for fair and equitable evaluation in determining financial need, Bridgewater State College is a participating member of the College Scholarship Service (CSS). This organization utilizes a needs analysis system which calculates expected parental and student contributions from income and assets. All students applying for financial assistance from Bridgewater must file a Financial Aid Form (FAF) with the College Scholarship Service, Box 2857, Princeton, New Jersey 08541. The FAF may be obtained through any high school guidance office or through Bridgewater's Financial Aid Office. It takes approximately six weeks for CSS to process applications and forward its analysis to the College and other agencies. The Financial Aid Office will then send the applicant a Bridgewater State College Institutional Financial Aid Request Form which must be completed and returned to the College. This Institutional Form must be supported by a copy of the previous year's federal income tax return.

The deadline for submission of all completed forms to the Financial Aid Office at Bridgewater for those students entering the Fall Semester is April 15. Applications will be accepted after this date, but the availability of funds for eligible students is not guaranteed. Applications for students entering the Spring Semester is November 15. In order to be considered for renewal funds, candidates must reapply each year, following the same application procedures. Although the amount and type of aid offered may change due to the funds available to the College and to the dictates of program guidelines, applicants will continue to be eligible as long as financial need is demonstrated and the student remains in good academic standing.

Listed below are several federal and state sponsored programs, including grants, loans and jobs, in which the College participates and offers to its students.

Basic Educational Opportunity Grant Program (PELL Grant)

This grant is administered directly by the federal BEOG Agency to all needy undergraduate students who are attending Bridgewater on at least a half-time basis. The amount of the award is based upon the student's eligibility for financial aid, the cost of the College attendance, and the monies available nationally for this program. The BEOG agency responds directly to the applicant with response papers called the Student Aid Report (SAR). The SAR must then be forwarded to the Financial Aid Office for proper calculation.

Supplemental Educational Opportunity Grant Program (SEOG)

This program is designed to assist undergraduate students of exceptional financial need who, without this grant, would be unable to continue their education. An SEOG grant is awarded after all other forms of aid have been applied and there still remains an unmet need that presents an unusual and severe financial hardship to the student and family.

The National Direct Student Loan Program (NDSL)

This program is designed for needy students who are enrolled at least half-time in an undergraduate or graduate academic program and who desire a loan to meet their educational expenses. Repayment of the loan at 5% interest begins 6 months after graduation and may be subject to various deferments and cancellation benefits depending on the vocation of the borrower after completion of his/her education.

Financial Aid



The Massachusetts Higher Education Loan Plan (HELP)

This is another source of financial assistance for the education of undergraduate or graduate students but designed to assist middle or upper income families. This particular loan enables a student to borrow directly from a bank, credit union, or savings and loan association, which is willing to make the education loan to the student. The maximum a student may borrow is \$2,500 a year and the interest rate is currently 9 percent. This may vary, however, depending on the availability of funds and the policies of the lending institutions. Students who wish to apply for HELP loans should go directly to their local bank to obtain the necessary application forms.

Consequently, the College will receive these completed forms from either the bank or student, and the Financial Aid Office will certify enrollment, college costs, and will recommend a proper loan amount to the lending institution. Many students are eligible for Federal Interest Benefits while participating in this program. If a student qualifies for these benefits, the Federal Government pays the interest while the student is attending school in good standing, until repayment begins.

The College Work Study Program (CWSP)

This program provides jobs for students who have financial need and who can earn a part of their educational expenses. College Work Study is designed to assist undergraduates and graduate students who are enrolled in at least a part-time program of study. Students are assigned to various departments or agencies on and off the campus, and they are paid at an hourly rate in accordance with campus policies and federal regulations.

Student Employment Referral Service (SERS)

The Student Employment Referral Service is part of Bridgewater State College's Work Study Program. The program is coordinated and administered through Bridgewater State College's Financial Aid Office. The S.E.R.S. assists all students of the College by identifying job opportunities with business and industry. The Student Employment Referral Service serves as a clearinghouse for part-time and full-time employment, seeking out job opportunities, keeping current employment listings, and referring students to employers.

Tuition Waiver Program

Bridgewater State College assists undergraduate students of exceptional financial need with tuition reductions of varying amounts. A waiver may be granted after all other forms of aid have been applied and there remains unmet need that presents financial hardship to the student and family.

Massachusetts State Scholarship Program (MSS)

Bridgewater State College requires all Massachusetts financial aid applicants to file for this undergraduate scholarship. The MSS is a \$300 stipend at all state colleges, and the awards are designed to assist eligible students with academic proficiency. To apply, simply list the MSS (0558) as a recipient on the Financial Aid Form (FAF) and then submit the form to Princeton, New Jersey, for processing. The deadline for students applying for Massachusetts State Scholarships is March 1 each year.

Financial Aid

Alumni Scholarships

The Bridgewater Alumni Association provides scholarships and a limited number of grants-in-aid each year to needy and deserving Bridgewater undergraduate students. These individual scholarships are provided by 12 separate trust funds, each specifying the particular criteria to be utilized in selecting a recipient for that award. Application forms are available during March and April each year and may be secured in the Office of Financial Aid, Student Services, Alumni Office, and the Student Union Director's Office.

Graduate Assistantships

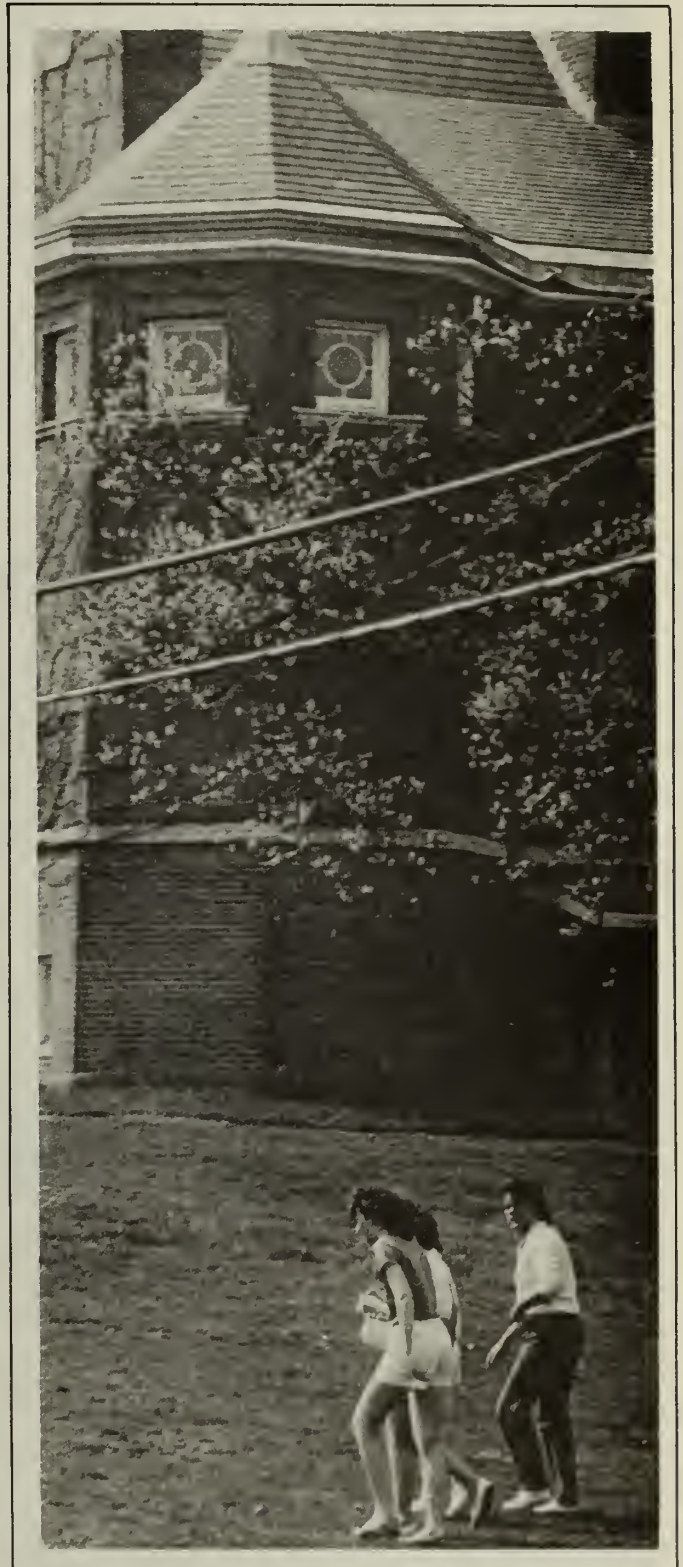
A limited number of graduate assistantships are offered by the Graduate School, subject to the availability of funds, in areas associated with certain programs of the College. For details regarding graduate assistantships, see the Graduate School section of the catalogue.

Other Scholarships

In order to give recognition and prestige to student achievement on campus, many academic departments, clubs, and campus organizations sponsor scholarships and monetary awards to deserving Bridgewater students. A complete listing may be found in the Student Handbook, *New Dimensions*, and further information regarding application procedures may be obtained in the Office of Student Services.

Other Employment Opportunities

Opportunities, which are not federally sponsored, also exist for student employment on the Bridgewater campus. Applications for student employment in the College Bookstore, Library, dining areas, Student Union, Campus Security, and the Department of Health, Physical Education and Recreation can be obtained through these individual departments. A number of Bridgewater students assist themselves financially in this manner.





Morning exercises, 1890

Academic Programs

Bachelor of Arts/ Bachelor of Science

The Bachelor of Arts and Bachelor of Science degree programs allow students to select from a number of areas, and provide preparation for high school teaching (if High School Education is elected as a minor), graduate school, and fields of endeavor related to the major area of study. Majors are currently offered in:

Anthropology	Geography
Art	History
Aviation Science	Management Science
Biology	Mathematics
Chemistry	Philosophy
Professional Chemistry	Physical Education
Chemistry-Geology	Physics
Communication Arts & Sciences	Political Science
Computer Science	Psychology
Earth Sciences	Social Work
English	Sociology
French	Spanish

Except for those students in the Humanities, Creative Arts, or History, a student may decide, after having chosen a major, whether to earn a Bachelor of Arts or a Bachelor of Science degree by the selection of free electives. A *free elective* is any course which is not used to meet the General Education Requirements or major requirements.

Thus, the Bachelor of Science degree is awarded to those who choose the majority of their free electives in the Social and Behavioral Sciences or Natural Sciences and Mathematics, while the Bachelor of Arts degree is awarded to those who choose the majority of their free electives in the Humanities or Creative Arts.

Students are advised to consult with their department chairperson or major advisor early in their academic career, but no later than the end of the sophomore year, in order to be certain that course selection will allow graduation with the desired degree.

Students seeking admission to the Aviation Science major must pass at least a Class II FAA physical for the concentration in Flight Training or a Class III FAA physical for the Aviation Management concentration.

Bachelor of Science in Education

The Bachelor of Science in Education prepares students for teaching in the elementary schools, or for teaching in the area of Special Education.

Majors are currently offered in:

Early Childhood Education
Elementary Education
Special Education



Major

A student must meet all requirements of the major as specified under the departmental listings. A minimum of 24 credits and a maximum of 36 credits within the major may be required by a department. The 24 to 36 credits reflect all courses taken in the major department, including those which are listed under the distribution of General Education Requirements. At least one half of the required courses in the major field (excluding cognate requirements) must be successfully completed at this College. The student should select a major by the end of the sophomore year.

Double Major

In order to graduate with a double major, a student must meet all requirements of both majors sought, without waiver. The student's petition to double major must be made in writing and agreed to by both departments. Official notification of the approval of a double major will be made by the Office of the Registrar. Completion of the double major will be reflected on the finalized transcript.

Academic Programs

Concentration

A concentration is a unified set of courses usually composed of core requirements and of requirements particular to the chosen major concentration. The total number of core and particular requirements must be at least 24 but not more than 36 credit hours, even if students are not required to complete a concentration for graduation. Cognate courses are not counted as part of the 36 hours. Only students selecting the major field of study may complete a concentration within that major. The major department may choose to have the completed concentration indicated on the student's transcript. Concentrations are currently available in:

Anthropology

Cultural Anthropology
Public Archeology

Aviation Science

Flight Training
Aviation Management

Communication Arts and Sciences

Speech Communication
Communication Disorders
Theatre

Early Childhood Education

Pre-School
Kindergarten-Primary

Earth Sciences

Geology

Management Science

General Management
Environmental and Resource Management
Finance and Accounting
Marketing
Information Systems Management
Transportation

Physical Education

Athletic Training
Coaching
Exercise Science/Health Fitness
Health
Motor Development Therapy
Physical Education for Adults
Physical Education for the Pre-Adolescent Child
Recreation

Political Science

Public Administration
International Affairs

Psychology

Industrial-Personnel Psychology
Medical Psychology

Sociology

Criminology
Third World Studies

Minor

A minor is a unified set of courses chosen outside of the major field of study requiring not less than 18 nor more than 21 hours. The minor is recorded on the student's transcript. Minors may include courses from only one department or may be multidisciplinary. Students may use courses which satisfy G.E.R. or departmental requirements to fulfill multidisciplinary minor requirements unless otherwise prohibited. At least one half of the courses required for the minor must be successfully completed at this College. Specific requirements for a minor are found under the departmental descriptions.

Minors are currently offered in:

<i>American Studies</i>	<i>Library Science</i>
<i>Anthropology</i>	<i>Linguistics</i>
<i>Art</i>	<i>Management Science</i>
<i>Art History</i>	<i>Mathematics</i>
<i>Aviation Science</i>	<i>Music</i>
<i>Biology</i>	<i>Philosophy</i>
<i>Canadian Studies</i>	<i>Physical Science</i>
<i>Chemistry</i>	<i>Physics</i>
<i>Coaching</i>	<i>Political Science</i>
<i>Communication Disorders</i>	<i>Portuguese</i>
<i>Computer Science</i>	<i>Psychology</i>
<i>Data Processing</i>	<i>Radio and Television</i>
<i>Earth Sciences</i>	<i>Operation and Production</i>
<i>Economics</i>	<i>Religious Studies</i>
<i>English</i>	<i>Russian</i>
<i>French</i>	<i>Russian & East European</i>
<i>Geophysics</i>	<i>Studies</i>
<i>Geography</i>	<i>Scientific Illustration</i>
<i>German</i>	<i>Sociology</i>
<i>Health</i>	<i>Spanish</i>
<i>High School Education*</i>	<i>Special Education</i>
<i>History</i>	<i>Speech Communication</i>
<i>Instructional Media</i>	<i>Theatre Arts</i>
<i>Italian</i>	<i>Urban Affairs</i>

*Students who wish to become junior high school or high school teachers elect a minor in High School Education and a major from one of the major fields offered. This minor requires more than 21 hours in order to satisfy Massachusetts certification standards.

Academic Programs

Directed Study

The college encourages students to pursue certain of their interests through directed study. Such an undertaking involves independent thinking, hard work, and creativity along with the guidance and help of a faculty member. The end result should be a paper or project accepted by the faculty member working with the student. Directed Study, which is limited to a maximum of six credits for graduation purposes and is primarily for upperclassmen, is available for the pursuit of such projects requiring independent work. Application forms for directed study are available from the student's department and should be submitted to the department chairperson prior to registration. Students may register through the Program of Graduate and Continuing Education for any directed study which is completed during the summer.

Internship

A number of departments within the College offer students the opportunity to enroll in an internship, Practicum, or Field Experience for academic credit. Such experiences provide advanced students, usually in their third or fourth year, the chance to undertake a supervised practical experience within their field of study. Normally, field experience opportunities are available only during the regular academic year. Students must register through the Program of Graduate and Continuing Education for any internship which is completed during those times when the day school is not in session.

Students interested in such a field experience have the option of (1) consulting with their faculty advisor for details on programs available through the department, or (2) developing their own program proposals, subject to the approval of the department. If the field experience desired is proposed by the student, it is the student's responsibility to locate a faculty member who will provide the necessary supervision.

APPLICATION AND SELECTION

Application forms for a field experience are available from the student's department. The completed form must be filed with the chairperson of the department in which the field experience is to be undertaken, and *must be filed with the department no later than the end of the first quarter of the semester prior to the semester in which the field experience is to be undertaken.*

The department will screen all applications in order to select those students best suited for the positions available. The chairperson will forward the approved application forms to the Registrar to enroll those students selected.

SUPERVISION AND GRADING

Supervision, evaluation and grading of a field experience is the responsibility of each department offering such a program. A student may be removed from the program if, in the judgement of the faculty supervisor, it is in the best interests of the student, agency, and/or College. Grades are based on written evaluations from both the faculty supervisor and the agency supervisor.

CREDIT

From three to fifteen credits in field experience may be earned and applied toward graduation requirements. The number of these credits which may apply toward the major will be determined by each department. A minimum of 45 clock hours in the field is required for each credit hour granted.

COMPENSATION

Normally, compensation may not be received except for minimal amounts to cover such expenses as travel.

Honors Program

The general aim of the Honors Program is to encourage students to do more intensive, independent, and creative work. More specifically, its aims are: to encourage superior and interested students to achieve their fullest intellectual potential through critical thinking, scholarship, and research; to help these students improve their skills in oral and written expression; to present an opportunity for frequent and close association of able students for intellectual exchange among themselves and with faculty members and other scholars; and to create an atmosphere which fosters intellectual, artistic, and academic achievement.

The following departments are at present participating in the Honors Program: Biology, Chemistry, Speech Communication, Theatre Arts and Communication Disorders, Elementary and Early Childhood Education, English, History, Foreign Languages, Mathematics and Computer Science, and Health, Physical Education and Recreation. Students who are interested should consult the appropriate chairperson.

The Honors Program does not require more credits than the regular course of study. Rather, it enables the superior student to take individualized courses and seminars and to conduct independent study and research under faculty guidance, culminating in an honors thesis or research project.

Graduation with departmental honors is recognized by inscribing on the student's transcript the phrase, *with Honors in* (the appropriate field).

Multidisciplinary Programs

The College offers a number of multidisciplinary programs, providing majors, minors, and pre-professional programs. See the section on *Undergraduate Multidisciplinary and Pre-Professional Programs*.

Academic Programs

Cross Registration

CAPS

College Academic Sharing Program is designed to provide full-time students attending a Massachusetts State College the opportunity to study at another Massachusetts State College in order to add a different or specialized dimension to their undergraduate studies. Students may take 3 to 30 semester hours of credit without going through formal registration procedures and without a formal transfer credit approval process.

SACHEM

Through the Southeastern Association for Cooperation of Higher Education in Massachusetts, qualified full-time students may cross-register for two courses each semester, one of which is not offered at their own institution without going through formal registration procedures. Tuition is covered within the student's full-time tuition charge at Bridgewater State College. Schools participating in this program include: Bristol Community College, Cape Cod Community College, Dean Junior College, Massasoit Community College, Stonehill College, Swain School of Design and Southeastern Massachusetts University. Application for cross-registration must be made through the Office of the Registrar.

General Education Requirement

The College requires that all students complete certain General Education Requirements in addition to courses in their major field of study and electives. These requirements are distributed throughout the various academic departments so that students will study a variety of disciplines during their college career.

Opportunity exists for students to design their own General Education Requirements rather than following the requirements outlined. For detailed information on this, contact the Coordinator of Academic Advising.

Distribution of GER courses must include the number of credit hours indicated for groups I-VI (total of 40 credits). The remaining six credits may be selected from group VII.

I HUMANITIES	9 crs.
English Composition I*	3 crs.
Literature*	3 crs.
Philosophy	3 crs.

*Proficiency in English Composition is required of all students. This requirement may be satisfied by passing EN 101 (English Composition I) with a grade of B or better. Students who receive a grade of C or below in EN 101 are required to take EN 102 (English Composition II), which *does not* count toward General Education Requirements. The requirement may also be met by successfully completing the AP, CLEP, or departmental challenge examination. Check English course offerings for those courses which do not satisfy the literature requirement.

II SOCIAL SCIENCES

9 crs.

History**	6 crs.
Economics, Geography as a Social Science, History, Political Science	3 crs.

**Massachusetts state law requires all students to take a course in the Federal and State Constitutions. Students may fulfill this requirement by electing HI 221 (U.S. History to 1865). Those who do not elect HI 221 must take PO 273 (U.S. and Massachusetts Constitutions).

III CREATIVE ARTS

6 crs.

Art	3 crs.
Music	3 crs.
Speech Communication, Theatre	3 crs.
Arts and Communication Disorders	

IV BEHAVIORAL SCIENCES

6 crs.

Anthropology	3 crs.
Psychology	3 crs.
Sociology	3 crs.

V NATURAL SCIENCES & MATHEMATICS

9 crs.

Sciences (including one semester of a lab science)	6 crs.
Mathematics	3 crs.

VI LIBRARY INTRODUCTION (LI 102)

1 cr.

This requirement should be met during the first year of attendance.

VII GER ELECTIVES

6 crs.

Humanities
Creative Arts (not more than 3 credits from each area)
Social Sciences (including Geography as a Social Science)
Behavioral Sciences
Health
Natural Sciences and Mathematics

Guldellnes on General Education Requirements

1. Only one course (3 credit hours) in a student's major field may be applied toward the GER's, except for English and History major programs in which a maximum of 6 hours may be applied. However, cognate courses required by the major will apply, as appropriate, toward the GER's.
2. No co-curricular activities may be used to satisfy the GER's.
3. Beyond the General Education and the major requirements, all remaining courses are free electives. A free elective is any course not required to fulfill either the General Education or the departmental and cognate requirements of the major.



The women's tennis team of the "Bridgewater Normal School" (as the College was then known) in 1895.

Academic Policies

The regular academic year consists of two semesters of approximately sixteen weeks each. Curricula leading to baccalaureate degrees are so planned that a student pursuing a normal program will ordinarily be able to complete the requirements for graduation in four years or eight semesters, with the exception of those students majoring in Special Education.

Graduation Requirements

Degrees will be awarded to candidates who have fulfilled the following:

1. A MINIMUM of 120 credits, distributed according to the General Education Requirements and the requirements of a major;
2. completion of at least 30 credit hours at Bridgewater (NOTE: No more than 69 credits earned at a two year institution, and accepted in transfer by Bridgewater State College, may be applied to the baccalaureate degree);
3. a minimum cumulative quality point average of 2.0 at Bridgewater and any other academic requirements of the student's major department as approved by the College governance procedures;
4. clearance of all financial debts to the College.

No student's name may appear on the graduation list unless the number of credits, including those completed successfully in the last semester, are sufficient to meet the minimum requirements for graduation.

Participation in graduation ceremonies is limited to those students who have met all graduation requirements. Students who have not met these requirements will be given the opportunity to participate in a subsequent ceremony.

Degree Application

All students who expect to receive their degree from Bridgewater State College are required to complete a formal degree application. These applications are available in the Office of the Registrar.

Degree Application Cards, signed by the Chairperson of the student's major department, must be returned to the Office of the Registrar by:

May 31..... for February Graduation
October 1..... for May Graduation
May 1..... for August Graduation

Graduation With Honors

Academic excellence for the baccalaureate program is recognized by inscribing the degree *summa cum laude* (cumulative average of 3.8), *magna cum laude* (3.6), or *cum laude* (3.3). The cumulative QPA determined for honors only is based on all college-level work attempted including all work attempted at other institutions.

Grading System

The college uses the letter-grade system of marking to indicate the student's relative performance; A — Superior; B — Excellent; C — Satisfactory; D — Poor; E — Failure; W — Withdrawn. In computing averages, grades are assigned the following numerical values: A — 4; B — 3; C — 2; D — 1; E — 0. No numerical value is assigned to P (Pass) and F (Fail) grades.

An INCOMPLETE may be given by an instructor only when a student has missed the final examination for good reason or has not completed a major assignment which can be finished within a short time. *The student's request for an Incomplete must be made in writing and must have the instructor's written approval.* Incompletes must be made up no later than the fourth week of the regular academic semester following that in which the Incomplete was recorded. A grade of "E" will automatically be entered on the transcript of any student who fails to meet this requirement.

Grades for courses which are taken through the Program of Continuing Education while enrolled as a day school student, become a part of the student's day session record and thus are used in computing the QPA.

No course for which a passing grade was received may be repeated for credit, nor will any grade received for a course which has been repeated replace the original passing grade.

Dean's List

The Dean's List is published at the termination of each academic year to honor academic achievement. A 3.3 average for the academic year is required with a minimum of 24 credits completed.

Academic Policies

Academic Standing

Credit Hours Attempted*	Probation QPA	Separation below this QPA
0 — 15	1.00 — 1.49	1.00
16 — 30	1.50 — 1.64	1.50
31 — 45	1.65 — 1.74	1.65
46 — 60	1.75 — 1.84	1.75
61 — 89	1.85 — 1.99	1.85
90 and above	Must maintain 2.00 or better	

*Credit hours attempted includes all work taken at Bridgewater State College plus all college credits accepted in transfer. However, only quality points earned at Bridgewater State College will be utilized in determining the student's cumulative quality point average (QPA).

Transfer students are allowed a first semester minimum QPA of 1.50. Thereafter the standards cited above (which must include number of hours of transfer credit) will apply.

Warning notices are sent at mid-semester to all students who fail to maintain a "C" average in any course.

Students are placed on academic probation at the end of the semester if they fail to maintain the minimum QPA required.

Any student whose QPA falls below the minimum will normally be separated from the College. Students who are withdrawn due to low scholarship may not take courses in either the Day School or the Program of Continuing Education for at least one semester, not including the summer session. It is highly recommended that such students give evidence of a semester's academic work at another institution of higher learning, upon reapplying to the College.

If readmitted, the student is placed on academic probation and must achieve a minimum QPA of 2.00 in order to continue.

Academic probation may involve (1) an adjustment in the student's academic load, (2) frequent interviews between the student and advisor for the analysis of difficulties and for checking the student's progress, (3) a stipulation that certain courses be taken to improve the student's academic performance, (4) restrictions on the student's extracurricular activities, and (5) other such precautions as are deemed advisable.

Registration

Each semester a registration and counseling period is held to select the next semester's program and to discuss the overall standing and requirements of the student.

Course Loads

The normal course load is fifteen hours. However, undergraduates may carry a minimum of twelve hours or a maximum of eighteen hours without special permission. In order to carry less than twelve hours, students must seek official approval from the Office of the Registrar. To carry more than eighteen hours, permission must be obtained from the Dean of Undergraduate Studies.

Students may not carry semester courses during the session in which they enroll in the Student Teaching Practicum.

Attendance Policy

Class attendance is an important part of the educational process in most courses. At the beginning of each course, the faculty member will explain to the students the policy on attendance, particularly what is considered excessive absence. Having this information, students are expected to use judgment and discretion about attending the class. First-semester freshmen and students on probation are allowed no unexcused absences.

Course Drops and Adds

During the first two weeks of a semester or the first five class days of a quarter, students may drop or add courses and no grade will be recorded. Drop-Add forms are available from your department chairperson and must be signed and returned to the Office of the Registrar during the Drop-Add period.

In cases where a student does not follow these procedures a grade of "E" will be entered on the record. This grade will be used to compute the QPA.

Withdrawal From Courses

If, for some serious reason, a student wishes to withdraw from courses after the Drop-Add period, written permission must be secured on forms provided by the Office of the Registrar. Only if such a form is filed in the Registrar's Office and the second copy returned to the head of the department in which the student is majoring may the grade of "W" be recorded. In all other instances a grade of "E" shall be given. *Normally, no student will be permitted to withdraw from a semester-long course after the tenth week of classes, or after the fifth week of a quarter course.*

Academic Policies

Course Audit

Students may register for courses on an audit basis under the guidelines noted below. The student will receive no academic credit for the courses nor will the grade be reflected in his/her cumulative grade point average.

1. A student may audit a course subject to the approval of his/her advisor or department chairperson and consent of the instructor.
2. Students are subject to conditions established by the department and/or instructor for the audited course.
3. Students registering for credit have course enrollment preference over auditing students. Therefore, a student must register for audit only during the drop/add period by submitting forms provided by the Registrar's Office. A student's status as an auditor in a course cannot be changed.
4. Students are expected to register for not more than one audit course per semester. Exceptions may be granted by petition to the Office of the Vice President of Academic Affairs.
5. No credit is awarded for audited courses. The student's transcript will reflect the course enrollment with the notation AU (no credit).

Withdrawal From College

Official withdrawal forms may be obtained from the Office of the Registrar. Resident students must have their withdrawal form signed by an official in the Office of Student Services. After completion, the form must be returned to the Office of the Registrar. Should the student leave the College without giving official notification, failing grades will be recorded for all courses. After the tenth week of classes, grades will be recorded for all classes and the withdrawal will not be effective until the last day of the semester.

academic standing may re-enter later by applying for readmission through the Office of Admissions.

Students who withdraw due to low scholarship should refer to the section on *Academic Standing*.

Declaration of Major For Freshmen

All students who entered as freshmen must formally declare a major or choose the status of an undeclared major in the second semester of the freshman year. Prior to this declaration freshmen may change their area of interest by obtaining the necessary forms from the Office of Academic Advising. Although Early Childhood, Elementary Education, and Special Education majors may not be formally admitted into the Teacher Education Program until the second semester of the sophomore year, they must confirm their continued interest in these majors by the same process used by the other freshmen for declaration of their majors.

Change of Major For Upperclassmen

Students may change majors at any time by obtaining a "change of major card" from the Office of the Registrar, securing the signatures of the department chairpersons involved, and filing the completed card with the Registrar.

Declaration of Minor

In order to be enrolled in any minor offered by the College, a student must declare the intended minor on forms available from the Office of the Registrar.

Certification that the requirements of the minor have been met is made on the Degree Application Card by the department offering the minor. Approved minors are recorded on the transcript of the student upon graduation.

Credit By Examination

The College encourages qualified students to meet certain graduation requirements through "Credit by Examination." Currently the College will award credit for successful completion of the College Level Examination Program's (CLEP) general or subject area examinations. In addition, certain departments offer their own examinations for which credit can be awarded. Additional information can be obtained from the Office of the Registrar.

Transfer of Credit After Admission

In order for undergraduates in the Day Session to receive credit for courses taken at other institutions, approval must be obtained in advance from the appropriate department chairperson.

Application forms are available in the Office of the Registrar. Applications for approval of a course from another institution should be accompanied by the appropriate catalogue from that institution. Transcripts of these approved courses must be submitted to the Registrar's Office within 6 weeks after the completion of the course. It is the student's responsibility to have official transcripts sent directly by the institution to the Office of the Registrar.

Grades of courses which are taken by matriculated undergraduate students through the Program of Continuing Education become a part of the student's record and thus are used in computing the QPA.

Academic Policies

Plagiarism

Academic honesty is expected of all students. Plagiarism and cheating are not condoned and are subject to an academic penalty, which may be failure for the course in which the violation took place. A record of the violation is kept and repeated offenses may result in suspension or dismissal from the College.

Standards for Representing the College

In order to represent the College in intercollegiate competition, or as a member of the student government, a student must:

- Be in good academic standing.

- Be a full-time student, which is defined as carrying a minimum of 12 semester hours of credit.

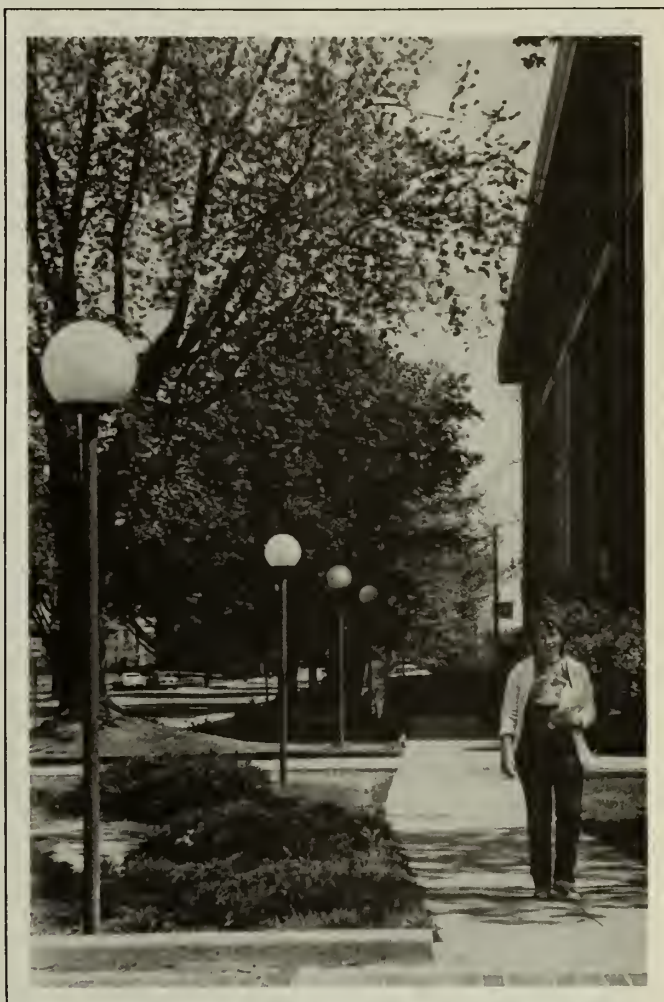
- Not have completed undergraduate degree requirements.

- Have completed not more than eight full semesters in the day session.

- Such eight full semesters in the case of a transfer student include the number of semester's work granted in transfer credit.

Dismissal Policies

A student is admitted to Bridgewater State College in the expectation that he or she will accept and abide by the high standards of conduct and scholarship established by the faculty, administration and student governing boards. The College reserves the right to require any student to withdraw who does not maintain acceptable academic standing. The College also reserves the right to dismiss with due process a student who does not meet the requirements of conduct and order, or whose behavior is inconsistent with the standards of the College. The Student Handbook, *New Dimensions*, outlines all campus policies and may be obtained in the Office of Student Services.





The Graduate School

The Graduate School at Bridgewater State College acts as a coordinating institution among the several divisions and departments engaged in graduate instruction.

The Dean of Graduate and Continuing Education, his fellow administrators, the Graduate Faculty, and the Graduate Education Council are responsible for the maintenance of appropriate standards for graduate degrees and certificates.

The primary objective of Bridgewater's graduate programs is to increase to an advanced level the graduate student's understanding of and competence in a designated field of study. In the process, by extending the student's area of knowledge, research skills, and creative talents, the graduate programs of the College aim to increase the individual's ability to pursue and contribute to a satisfying career.

* * * * *

The Office of the Graduate School, which is located in the Maxwell Library, is open from 8:00 a.m. to 5:00 p.m., Monday through Friday, throughout the year except for legal holidays. Persons interested in working toward a master's degree or Certificate of Advanced Graduate Study (CAGS) on either a full-time or part-time basis should request appropriate application material.

Students are strongly urged to familiarize themselves with the general policies, procedures, and program requirements of the Graduate School outlined in the following pages prior to enrolling in courses carrying graduate credit. For additional information relative to a specific graduate program, students should contact the appropriate Departmental Program Coordinator by telephoning 697-1200. For general information in addition to that provided in the catalogue, students may make an appointment with a counselor by telephoning the Graduate School Office at 697-1300.

GRADUATE PROGRAMS

Master of Arts

M.A. Programs Currently Offered — The following six programs leading to the degree of Master of Arts are presently offered:

- Biology
- Chemistry
- Communication Studies
- English
- History
- Humanities

Proposed M.A. Programs

Psychology — Plans are being developed for the implementation of a Master of Arts in Psychology program, to be offered cooperatively with Southeastern Massachusetts University. Final approval by the Board of Regents of Higher Education is required.

Sociology — Plans are also in progress for a Master of Arts in Sociology program to be offered by Bridgewater State College. Final approval of this proposed program by the Board of Regents of Higher Education is required.

Master of Arts in Teaching

Programs leading to the degree of Master of Arts in Teaching are offered in the following fields:

- Behavioral Sciences
- Biology
- Chemical Sciences
- Creative Arts (Art, Music,
Speech Communication and Theatre)
- Earth Sciences
- English
- Foreign Languages
- Geography
- History
- Humanities (English, Foreign
Languages, Philosophy and
Religious Studies)
- Mathematics
- Physical Sciences
- Physics
- Social Sciences (Economics,
History, Political Science)
- Speech Communication and Theatre

The Graduate School

Master of Education

Programs leading to the degree of Master of Education are offered in the following fields:

Counseling
Early Childhood Education
Elementary Education
Elementary School Mathematics
Health Science
Instructional Media
Reading
School Administration
School Librarianship
Special Education

Master of Science

A program leading to the degree of Master of Science is offered in the following field:

Physical Education



Certificate of Advanced Graduate Study (CAGS)

Programs leading to the CAGS are offered in the following fields:

Field of Concentration:

BEHAVIORAL SCIENCES

Areas of Study:

Anthropology
Psychology
Sociology

Field of Concentration

CREATIVE ARTS

Areas of Study:

Art
Music
Speech Communication and Theatre

Field of Concentration

NATURAL SCIENCES & MATHEMATICS

Areas of Study:

Biology
Chemistry
Earth Sciences
Geography
Mathematics
Physics

Field of Concentration:

EDUCATION

Areas of Study:

Computers in Education
Counseling
Early Childhood Education
Elementary Education
Elementary School Mathematics
Health Science
High School, Middle School & Adult Education
Instructional Media
Physical Education
Reading
School Administration
School Librarianship
Special Education

Doctor of Education

A collaborative Ed.D. program in School Leadership and Administration is offered by Bridgewater State College and the University of Massachusetts at Amherst.

The Graduate School

ADMISSIONS

Application Procedures

The Graduate School admits students in November and May of each year. An application is not complete and, in general, applicants will not be considered for admission unless all of the appropriate documents indicated below have been received by the Graduate School Office on or before the appropriate application deadline: October 1 for November admissions and March 31 for May admissions. It is the responsibility of the student to make certain that all application documents are received in time.

Students seeking admission to a program leading to a master's degree must hold a bachelor's degree from a four-year institution of acceptable standing. (College seniors may be admitted on a conditional basis.) Students seeking admission to a CAGS program must hold an appropriate master's degree from an institution of acceptable standing. Ordinarily, the master's degree must be in an area within the CAGS field chosen by the student.

Applicants should indicate a specific degree or certificate program (and also the area of study) when they request application forms. It is difficult for the Graduate School to send appropriate application forms without this information. Any student who has filed material for admission to a given graduate program or area of study, and subsequently decides to apply for admission to another program or area of study, should consult the paragraph on "Changes in Program" in this section of the catalogue.

All students seeking admission to a Master of Arts program, Master of Science program, and certain Master of Arts in Teaching, Master of Education, and CAGS programs (see divisional/departamental requirements) should request a formal interview with the coordinator of the program prior to the deadline for submitting applications. Voluntary interviews will be scheduled for those who elect to have them; applicants should contact the appropriate program coordinator.

Applicants to the Graduate School should make certain that the material listed below is on file in the Graduate School Office. All correspondence and application material should be sent to the following address: Graduate School Office, Bridgewater State College, Bridgewater, Massachusetts 02324.

1. An appropriate master's degree or CAGS application form and Graduate School Application Fee of \$25.00.

Application forms may be obtained from the Graduate Office. Checks covering the non-refundable \$25.00 Graduate School Application Fee should be made payable to *Bridgewater State College* and submitted to the Graduate Office accompanying the program application form.

2. Two official copies of all undergraduate and graduate transcripts.

All transcripts must be sent by college registrars directly to the Graduate Office and must bear the seal of the College. Applicants who have attended more than one undergraduate college and/or graduate school should arrange to have duplicate transcripts of all course work, including grade results, sent directly to the Graduate School. Graduates of Bridgewater State College should request the College Registrar to send transcripts to the Graduate School Office. Applicants who have enrolled in Bridgewater's Program of Graduate and Continuing Education should request the Continuing Education Office to send their transcripts to the Graduate School Office.

Applicants who have successfully completed graduate courses, as well as those who hold a degree(s) in addition to the baccalaureate, must fulfill all application requirements as set forth in this catalogue. It should be noted that the successful completion of graduate courses prior to application shall not obligate the academic division/department or the Graduate School to recommend an applicant for acceptance.

3. The results of the Graduate Record Examination (GRE) — master's degree applicants only.

All master's degree applicants must arrange to have scores from the GRE General Test (formerly called Aptitude Test) sent from the Educational Testing Service directly to the Graduate School Office. Photocopies of scores and scores submitted by the applicant are not acceptable. Application forms and information relative to the Graduate Record Examinations may be obtained from the Graduate School Office. Since up to six weeks may elapse between the test date and the receipt of scores, applicants should take the test well in advance of the Graduate School's deadline for receipt of completed applications. In addition, applicants for a Master of Arts program must submit scores from the appropriate Subject Test (formerly called Advanced Test). All applicants from countries where English is not an official language, must also submit scores on Educational Testing Service's Test of English as a Foreign Language (TOEFL) examination. Ordinarily, only students with TOEFL scores of 500 or better will be considered for admission.

As indicated above, all master's degree applicants must submit the results of the Graduate Record Examination. In addition, students may submit Miller Analogies Test scores. Information relative to the Miller Analogies Test may be obtained by contacting the Continuing Education Office in the Maxwell Library.

The Graduate School

4. Three letters of recommendation — master's degree applicants only.

Forms for recommendations are available at the Graduate School Office. In general, only letters of recommendation submitted on these forms and sent by the reference directly to the Graduate School will be accepted. These letters provide an estimate of the applicant's ability to pursue successfully a master's degree program in the proposed field or concentration. For M.A.T. and M.Ed. applicants at least two letters must be from faculty who have taught the applicant at the collegiate level (undergraduate or graduate). The third letter may be from an appropriate employer or school administrator for whom the applicant has taught. Applicants who received the bachelor's degree more than five years prior to completing their application, may substitute other appropriate references if approved beforehand by the Graduate School. For M.A. and M.S. applicants at least two letters must be from persons who have taught the applicant in the appropriate area of concentration. The third M.A. letter may be from any faculty member who has taught the applicant at the collegiate level, while the third M.S. letter may be from any faculty member who has taught the applicant at the collegiate level or from an appropriate employer or school administrator for whom the applicant has taught. Applicants for either the M.A. or M.S. who received the bachelor's degree more than five years prior to completing their application, may substitute other appropriate references if approved beforehand by the Graduate School.

5. Additional divisional/departmental requirements.

There may also be special divisional or departmental requirements relative to the application. Such requirements, if any, are to be found under each division's or department's description of its graduate program(s).

Approximately one month prior to each application deadline for admission a notice will be sent to applicants listing the documents which have not been received. Applicants will be notified when their application folders are complete. All transcripts and other documents submitted become the property of the Graduate School and will not be returned. Copies of transcripts and other documents will not be issued from the Graduate School Office.

Action by the Division/Department:

All completed applications are sent to the academic division/department in which the applicant proposes to concentrate. After reviewing these applications, divisions and their departments make recommendations to the Graduate School.

Recommendations may include:

1. That the applicant be admitted to the Graduate School. Graduate students accepted with course deficiencies will be required to take prescribed undergraduate and/or graduate work without credit toward the degree or certificate.
2. That the applicant be admitted conditionally, pending the awarding of a baccalaureate. A college senior who is admitted to the program on a conditional basis should request his or her college to forward complete baccalaureate transcripts as soon as possible.
3. That the applicant not be admitted.

Action by the Graduate School

The Dean of Graduate and Continuing Education, after reviewing the recommendations of the academic division/department, notifies the applicant of the action taken. This notification will be mailed in late November and May to November and May applicants, respectively.

Graduate Advisors and Program Planning

Each graduate student who is accepted is assigned an advisor(s) representing the student's area of study. All master's degree and CAGS students are required by the Graduate School to enroll in the following program planning course, in addition to completing minimum credit requirements in their program.

GS 501 Graduate Program Planning 1 graduate credit

The planning and development of a coherent program of graduate study appropriate to the student's academic and professional background and objectives. Graduate students who have been accepted into a master's degree or CAGS program should enroll under the direction of their advisor(s) during their first term of course work after acceptance by the Graduate School. For details, students should contact their advisor(s) by mid-December, if accepted in November, and by the end of May, if accepted in May.

All accepted students will receive from the Graduate School copies of the form *Graduate Program Proposal*. Students are required to have a completed copy of this form sent to the Graduate School Office when applying to graduate. It should be noted that conferences with advisors may be difficult or impossible to arrange during holidays and college vacations, and during the months of June, July, and August.

The Graduate School

Change in Program

Any request to change from one graduate program to another must be made prior to the deadline for receiving completed applications as indicated in the College Calendar. Students wishing to change programs should request the Graduate School in writing to review their file to determine what additional material needs to be submitted. Students requesting a change in program should be aware that their original date of acceptance by the Graduate School will not change. Appropriate credits earned prior to a program change may be transferred to the new graduate program with the approval of the new advisor.

GENERAL POLICIES AND PROCEDURES

Students are responsible for all information given in the latest edition of the catalogue and also for any notices posted on the bulletin boards of the Graduate School, the Continuing Education Office, the Library, and the appropriate academic department. Students who have questions regarding the graduate regulations presented in this catalogue should contact the Graduate School Office.

Change of Name and/or Address

Students should promptly notify the Office of the Graduate School of any change in name or address by using the appropriate form. Failure to do this may cause unfortunate complications and delays which inconvenience students. Forms are available at the Office of the Graduate School.

Deadlines

Students are reminded to consult the annual College Calendar for deadlines and dates relative to such matters as: admissions, Graduate Record Examinations, comprehensive examination requests, approval of transfer credit, and filing applications to graduate. This Calendar is printed in the front of the College catalogue.

Time Limits--Program and Course

All graduate program requirements must be completed within six years of the date of the student's acceptance. In addition, no graduate course offered for master's degree or CAGS credit may be more than six years old at the time program requirements are completed.

Course Registration

Graduate course work is offered through both the Program of Graduate and Continuing Education and the Day Session on either a full-time or part-time basis. Most students complete their graduate work in approximately three years. All students should realize that it is not possible to set an absolute deadline for completing a graduate program. This is due to such factors as the College's need to reserve the right to cancel any course for which there is insufficient enrollment.

All students who have been accepted in a graduate program and who plan to enroll in course work offered through Continuing Education should preregister by mail. Registration forms are attached to the Continuing Education brochure which is printed prior to the beginning of each term. All students who plan to enroll in course work offered through the day session should contact the Graduate School Office for specific registration information well in advance of the beginning of the term. A registration form must be completed by the student and approved by the Graduate School Office prior to being submitted by the student at registration. A transcript indicating completion of the bachelor's degree must also be submitted to the Graduate School.

Full-time graduate study is defined, for academic purposes only, as being enrolled for nine or more graduate credits in a given term in the day session and/or Continuing Education. Part-time graduate study is defined, for academic purposes only, as being enrolled for less than nine graduate credits in a given term in the day session and/or Continuing Education. Ordinarily, students should not register for more than twelve undergraduate and/or graduate credits during the fall or spring term. Graduate students may not register for more than two courses (6-8 credits) during each summer session.

Program and Course Prerequisites

Program prerequisites may be required to ensure adequate preparation for graduate work in the area of study. In certain cases, these prerequisites may be fulfilled after the applicant's acceptance by the Graduate School. Certain advanced courses require that students have completed specific prerequisite courses.

Grading System

Graduate course achievement will be rated A (Excellent), B (Good), C (Poor but passing), F (Failure), W (Withdrawn), INC (Incomplete), or AU (Audit). GS 501 Graduate Program Planning will be graded on a P (Pass)/F (Fail) basis.

The Graduate School

Withdrawal From Program

Students who decide to withdraw from a graduate program should notify the Graduate School of their intentions in writing as soon as possible. (Students should also consult course withdrawal procedures and refund policies indicated elsewhere in this catalogue.)

Academic Dismissal

Students who earn grades of C or below in more than two graduate courses (i.e., any course in which the student enrolls for graduate credit after acceptance in a program) must withdraw from the program unless special permission to continue is recommended by the advisor, the major division/department, and the Graduate Education Council.

Graduate and Undergraduate Credit

Courses at Bridgewater with 500 level numbers carry graduate credit and are open only to graduate students. Certain courses numbered below 500 may be taken for either graduate or undergraduate credit. Graduate School guidelines for faculty teaching these latter courses indicate that advanced-level work should be required of graduate students. The guidelines recommend that more rigorous examinations and more sophisticated research papers should be expected to take into account the different quantitative and qualitative standards associated with graduate study.

The level of credit earned in a course must be that designated by the student at the time of registration. Requests for credit level changes must be received by the Office of Continuing Education prior to the beginning of the fourth meeting of a class. For day session courses, requests for credit level change must be received by the Graduate Office prior to the beginning of the fourth week of the semester. Ordinarily, a student who has not completed all requirements for the baccalaureate may not enroll in any course for graduate credit.

Seniors at Bridgewater State College in their last semester of course work may be permitted, with the approval of the undergraduate advisor and the Graduate Education Council, to enroll in courses for graduate credit.

Transfer Credit

Transfer credit at the graduate level is defined at Bridgewater to include two distinct credit situations. First, transfer credit is defined as being any appropriate graduate credit taken at Bridgewater State College or at another accredited institution *prior to acceptance* to a Bridgewater graduate program. This includes appropriate graduate credit earned in courses in which the student is enrolled at the time of acceptance. Second, transfer credit is defined to include appropriate graduate credit taken at an accredited institution other than Bridgewater State College *after acceptance* to a Bridgewater graduate program. All courses to be used as transfer credit in a graduate program must have the approval of the advisor and be recorded on the student's *Graduate Program Proposal*. Details regarding the matter of transfer credit as it applies to Bridgewater's master's degree and CAGS programs are provided below.

Transfer Credit — Master's Degree Programs

A student who has enrolled in appropriate courses at Bridgewater or at another accredited institution prior to acceptance by the Graduate School may request that up to fifteen graduate credits (*including any credits earned in courses in which the student is enrolled at the time of acceptance*) be accepted in partial fulfillment of degree requirements. Approval is subject to the following conditions: 1) that not more than six of the fifteen credits being transferred are from an institution accredited at the graduate level other than Bridgewater State College; 2) that a grade of B or better has been earned in all courses enrolled in prior to the student's acceptance by the Graduate School; and 3) that courses being transferred have not been used to fulfill the requirements of another degree or certificate. A form entitled *Petition for Acceptance of Transfer Credit* is sent to the student by the Graduate School Office at the time of acceptance. If courses enrolled in prior to acceptance are to be applied toward fulfillment of requirements for a master's degree, the student must submit the above form no later than the deadline indicated in the College Calendar. It should be noted that all transfer courses are subject to the regulation governing time limits — no graduate course offered for the degree may be more than six years old when degree requirements are completed.

After a student has been admitted to a master's degree program, a maximum of six graduate credits of grade B or better, taken at an institution accredited at the graduate level other than Bridgewater State College, may be transferred if approved by the advisor. It should be noted, however, that of the total number of credits offered for the degree, taken both prior to and after acceptance, not more than six can be transferred from other graduate schools. Two official transcripts of courses taken at another institution after acceptance must be sent directly to the Bridgewater State College Graduate School.

The Graduate School

Transfer Credit — CAGS Programs

A student who has enrolled in appropriate courses at Bridgewater or at another accredited institution after completion of a master's degree and prior to acceptance in a CAGS program may request that up to six graduate credits be accepted in partial fulfillment of CAGS requirements. This includes credit earned in courses in which the student is enrolled at the time of acceptance. (CAGS in Education applicants, who must enroll in ED 570 CAGS Seminar prior to review of their application, may request that up to six graduate credits in addition to ED 570 be accepted as transfer credit.) A grade of B or better is required of all courses being transferred. A form entitled *Petition for Acceptance of Transfer Credit* is sent to the student by the Graduate School Office at the time of acceptance. If courses enrolled in prior to acceptance are to be applied toward fulfillment of CAGS requirements, the student must submit the above form no later than the deadline indicated in the College Calendar. It should be noted that all transfer courses are subject to the regulations governing time limits — no graduate courses offered for the CAGS may be more than six years old when certificate requirements are completed.

After a student has been admitted to a CAGS program, a maximum of six graduate credits of grade B or better, taken at an institution accredited at the graduate level other than Bridgewater State College, may be transferred if approved by the advisor. It should be noted, however, that of the total number of credits offered for the CAGS, taken both prior to and after acceptance, not more than six can be transferred from other graduate schools. Two official transcripts of courses taken at another institution must be sent directly to the Bridgewater State College Graduate School.

Eligibility — Only those who have been accepted into a Bridgewater graduate program are eligible to be awarded an assistantship.

Application — Application forms and detailed descriptions of the specific graduate assistantships listed above may be obtained from the Graduate School Office. Completed assistantship applications should be returned to the appropriate administrator indicated in the table above. Deadlines for assistantship applications are provided in the assistantship descriptions.

Selection of Assistants — After an assistant has been selected by the assistantship administrator, a recommendation is forwarded to the Graduate School. Those applicants who are awarded an assistantship will receive a letter of appointment from the Graduate School Office.

Duration — Assistantships are held for a specified period of time and may include summer sessions. Subject to availability of funds, assistantships may be renewed upon the request of the assistantship administrator, satisfactory performance of duties, and maintenance of acceptable standing in a graduate program.

Compensation — Graduate assistants receive a stipend of \$3,600.00 per academic year (September-June) unless otherwise indicated in the assistantship description. Assistants will receive tuition and fee remission for up to twelve credits of course work during each of the fall and spring semesters, and for six credits during each of the two summer sessions, if applicable. Ordinarily, recipients are expected to work a minimum of 20 hours per week. Partial assistantships are pro-rated in terms of stipends and work hours.

Graduate Assistantships

As indicated below, the Graduate School offers a limited number of assistantships, subject to availability of funds as determined by the College's budget, in areas associated with certain graduate programs of the College.

Graduate Assistantships Available:

Area of Assistantship	Associated B.S.C. Graduate Program	Assistantship Administrator
Career Planning and Placement	Counseling preferred	Mr. Denny Ciganovic, Director of Placement
Laboratory School Education	All Education programs	Dr. L. Stephen Traw Associate Dean, Burnell Lab School
Media and Librarianship	Media or Librarianship	Dr. Alan Lander Coordinator, Media and Librarianship
Communication Studies	Communication Studies	Professor Lee Dunne, Chairperson, Speech Communication
Student Union Management	Counseling	Dr. Richard Veno, Director of the Student Union

The Graduate School

Independent Study

Each division's/department's graduate offerings include two courses in which a student who has been accepted in a graduate program and who meets the course prerequisites can pursue independent study under the direction of a faculty advisor.

—**502 Research** (credit to be arranged) — Original research undertaken by the graduate student in his or her field. The student's investigations ordinarily culminate in a thesis. The number of credits awarded for the research may vary, and the student may repeat the course until a maximum of 9 credits in an M.A. program and 6 credits in an M.A.T., M.Ed., M.S., or CAGS program is earned toward the minimum credit requirements for the degree or certificate.

Matriculated graduate students who wish to enroll in *Research* must complete and file with the Graduate School Office the Graduate School form *Approval of Thesis Topic and Outline*. A Graduate School letter of approval to enroll in —502 should be requested.

—**503 Directed Study** (credit to be arranged) — The course is designed for the graduate student who desires to study selected topics in his or her field. The number of credits awarded for *Directed Study* may vary, and the student may repeat the course until a maximum of 6 credits is earned.

Students who wish to enroll in *Directed Study* should obtain the form *Request for Directed Study* at the Graduate School Office. The completed form should be presented to the Continuing Education Office at registration.

Enrollment in a *Directed Study* ordinarily is limited to students who have been accepted to a graduate program at Bridgewater State College and who have completed a minimum of 15 approved graduate credits.

Thesis

Graduate students submitting a thesis should obtain a copy of the Graduate School brochure entitled *The Master's Thesis*.

The student's thesis committee is comprised of at least three faculty members, including a thesis committee chairperson appointed by the graduate program coordinator. All thesis committee appointments should follow consultation with the student's advisor and the student.

It is the responsibility of the student to obtain from the Graduate School Office three copies of the form *Approval of Thesis Topic and Outline* and submit the completed copies to the advisor for approval by the members of the student's thesis committee. The student's thesis committee chairperson should retain the original copy of the completed form and should return the remaining two copies to the student. The student retains one copy for his or her records and submits the other to the Graduate School Office in order to be eligible to register for thesis credit under the course heading *Research*. (If the student, with the approval of the thesis committee, changes the thesis topic, revised copies of the above form must be filed).

Students should refer to the course entitled *Research* which appears in this catalogue under their major department and in this section under *Independent Study*, as well as consult with their advisor, relative to the matter of earning credit for research done in conjunction with a thesis. Students must be enrolled in *Research* during any period in which a faculty member is directing the thesis.

Three unbound copies of the approved thesis must be submitted to the Graduate School no later than the completion of all other degree requirements. Each copy must contain an abstract of the thesis. The Office of the Graduate School arranges for the binding of theses. A fee of \$12.00 per copy is charged. Checks should be made payable to: *Library Development Trust Fund*.

Comprehensive Examination

While students are expected to make satisfactory progress in their course work, the accumulation of credit hours is not regarded as the sole index of progress or as a guarantee that the master's degree or CAGS will be granted. Students must give evidence that they can integrate information and ideas from the various areas in which they have studied. The principal instrument for measuring this achievement is the Comprehensive Examination. This examination may be written and/or oral, as determined by the student's division/department. It is based upon the major area(s) of study, as well as related areas, and may include work done on a thesis.

A student who plans to take the Comprehensive Examination should file the Graduate School form entitled *Examination Request*, together with a non-refundable Comprehensive Examination Fee of \$30.00. Checks should be made payable to *Bridgewater State College*. The form should be completed and filed along with the fee by the student in the Graduate Office no later than the deadline indicated in the College Calendar. Comprehensives are given during the months of November and April only. Ordinarily, the examination may not be taken prior to the last term of course work.

Students who fail the Comprehensive Examination shall be given one further opportunity to take it after they have made substantial progress in whatever additional work may be prescribed by the advisor. The second Comprehensive Examination may not be taken prior to the next official examination period. Students must file a new *Examination Request* form prior to the next application deadline indicated in the College Calendar. No additional fee is charged. Those who take the Comprehensive Examination will be notified of the results by mail.

The Graduate School

Application to Graduate

Students who are nearing the completion of their graduate program requirements and who plan to receive a master's degree or CAGS in February, May, or August, should request the form *Application to Graduate* from the Graduate Office. This form should be completed by the student and filed, together with the candidate's *Graduate Program Proposal*, approved by the faculty advisor, in the Graduate School Office no later than the deadline indicated in the College Calendar. Failure to file before the deadline will ordinarily postpone degree conferral. A non-refundable Commencement Fee of \$11.00 (plus an additional fee for academic regalia for students attending commencement exercises) is required at the time of filing the *Application to Graduate*. Checks should be made payable to the *Bridgewater Commencement Fund*.

No degree or certificate will be conferred and no graduate transcripts will be issued unless all tuition and fees have been paid in full.

Diplomas are awarded at May Commencement and also during the months of February and August. Students who receive their diplomas in February or August, as well as those who complete their degree work in May, should plan to attend May Commencement and wear appropriate academic regalia. Information relative to Commencement is mailed in early May to students who will be attending graduation exercises.

In the event that a student does not receive the degree at the anticipated time, the student should contact the Graduate School Office regarding procedures for reapplying to graduate.

GRADUATE PROGRAM REQUIREMENTS

Master of Arts

General Requirements — A minimum of thirty approved graduate credits is required for the Master of Arts degree, in addition to a one-credit program planning course to be taken under the direction of an advisor upon acceptance in the program. All credits must have the advisor's endorsement. A thesis is optional in certain Master of Arts programs; students should consult appropriate departmental sections of this catalogue for specific program requirements. No more than nine credits associated with a thesis may be used to meet the minimum credit requirements for the degree. For additional details, students should consult the sections in this catalogue entitled *Thesis and Independent Study* and request the brochure entitled *The Master's Thesis* from the Graduate School Office. Ordinarily, at least one-half of the degree credits should be earned in courses limited to graduate students (500 level).

Preliminary Examination — In some departments, a Preliminary Examination is given during the semester following the successful completion of twelve credits (including transfer credits) of approved graduate work. This examination may be written and/or oral. Its purposes are: 1) to determine the degree of skill achieved in relating and integrating graduate work completed to date; 2) to ascertain the readiness of the student for additional graduate work; and 3) to enable the advisor to plan the remainder of the student's program. The Graduate School will apprise students of their performance on the Preliminary Examination. Unsatisfactory performance may require additional course work and a second examination. If a student fails to perform satisfactorily a second time, he or she will be dropped from the degree program.

Research Proficiency Examination — Students are expected to demonstrate competence with a research tool appropriate to their program, such as a reading knowledge of a foreign language, computer programming, or statistics. Students should consult with their advisor and major department relative to specific departmental requirements and procedures.

Comprehensive Examination — All students are required to pass a comprehensive examination. For details, see the paragraph in this section of the catalogue entitled *Comprehensive Examination*.

Master of Arts in Teaching

General Requirements — A minimum of thirty approved graduate credits is required for the M.A.T. degree, which is offered through the academic divisions and departments of the College, and the Department of High School, Middle School, and Adult Education. In addition, a one-credit program planning course is taken under the direction of an advisor upon acceptance in the program. Students should consult the appropriate divisional and departmental sections of this catalogue. Degree credits must have the endorsement of the appropriate advisor. A thesis is optional in Master of Arts in Teaching programs. A maximum of six credits may be earned in conjunction with a thesis. The student's work should include results of original research and give evidence of acceptable scholarship. Each student who elects to do a thesis should enroll in the research course (—502) listed under the major department. Students should consult the sections of this catalogue entitled *Thesis* and *Independent Study* and request the brochure entitled *The Master's Thesis* from the Graduate School Office. Ordinarily, at least one-half of the degree credits should be earned in courses limited to graduate students (500 level).

Elective Courses — The degree of Master of Arts in Teaching is designed primarily to meet the varied needs of graduate students who are currently teaching at the secondary level. Emphasis is placed on providing appropriate breadth and depth in the student's field of interest as well as in the field of education. The balance between courses in education and the subject field is determined by the student's background.

The Graduate School

In addition, this degree allows persons who are not currently certified at the high school level to complete a State-approved post-bachelor's degree certification program. For details, consult the Department of High School, Middle School, and Adult Education section of this catalogue.

At the time of acceptance students will be assigned an advisor from the academic area in which they are concentrating and an advisor from the Department of High School, Middle School, and Adult Education. All electives in the academic area of study should be approved by the student's advisor in that academic area prior to registration. All electives in education to be taken for degree credit should be approved by the student's education advisor prior to registration. Students not yet accepted to an M.A.T. program should consult with the appropriate academic and education coordinators for course selection and approval.

Each student, in consultation with advisors, elects courses which meet his or her professional needs. Ordinarily, at least 18 graduate credits should be elected from the academic area (and related areas) in which the student is concentrating. In addition, at least one course taken for graduate credit should be elected from each of the following areas of professional study:

RESEARCH METHODS AND FINDINGS

GC 500 Research and Evaluation

HUMANISTIC STUDIES

ED 310 Aims and Philosophy of Secondary Education

ED 480 Philosophy of Education

ED 505 Historical Foundations of Education

ED 580 Philosophical Foundations of Education

ED 583 Directed Study in the Philosophy of Education

BEHAVIORAL STUDIES

ED 520 Psychological Foundations of Education

ED 523 Directed Study in Educational Psychology

ED 590 Sociological Foundations of Education

TEACHING THEORY

ED 412 Strategies for Teaching Social Studies in the High School

ED 414 Strategies for Teaching English in the High School

ED 416 Strategies for Teaching Earth Sciences in the High School

ED 417 Strategies for Teaching Geography in the High School

ED 419 Strategies for Teaching Physical Science in the High School

ED 421 Strategies for Teaching Biology in the High School

ED 422 Strategies for Teaching Mathematics in the High School

ED 424 Strategies for Teaching Foreign Language in the High School

ED 425 Strategies for Teaching Art in the High School

ED 426 Strategies for Teaching Speech & Theatre in the High School

ED 440 Methods and Materials in Secondary Education

ED 443 Secondary School Curriculum

ED 578 Educational Software Development and Computer Applications I

SA 571 Introduction to Theory and Understanding of Group Interaction

Comprehensive Examination — All students are required to pass a comprehensive examination. For details, see the paragraph in this section of the catalogue entitled *Comprehensive Examination*.

Teaching Requirement — All students enrolled in a program leading to the degree of Master of Arts in Teaching are required to fulfill the degree prerequisite of teaching experience. This requirement may be met by one of the following procedures:

1. **CERTIFICATION.** The possession of an appropriate teacher certificate issued by the Department of Education of the Commonwealth of Massachusetts.

2. **TEACHING EXPERIENCE.** One full semester of successful classroom teaching experience at the appropriate level as a full-time employee in an accredited public or private school is ordinarily required. (In order to document this experience, students should submit the completed form entitled *Certificate of Teaching* to the Graduate School. This form is available at the Graduate Office.)

3. **STUDENT TEACHING.** Those who plan to student teach through Bridgewater State College after acceptance should familiarize themselves with the policies regarding *Admission to the Teacher Education Program* (see the Division of Professional Education's statement in this catalogue.) Students should meet the prerequisites for the student teaching course most appropriate to their program. The student must register for supervised teaching through Teacher Preparation and the Registrar's Office after the application for student teaching has been approved.



The Graduate School

Master of Education

General Requirements - A minimum of thirty to thirty-six approved graduate credits, depending upon the program, is required for the Master of Education degree, in addition to a one-credit program planning course to be taken under the direction of an advisor upon acceptance in the program. Students should consult the appropriate departmental section of this catalogue. Degree credits must have the endorsement of the advisor. A thesis is optional in Master of Education programs. A maximum of six credits may be earned in conjunction with a thesis. The student's work should include the results of original research and give evidence of high scholarship. Each student who elects to do a thesis should enroll in the research course (—502) listed under his major department. Students should consult the sections of the catalogue entitled *Thesis* and *Independent Study* and request the brochure entitled *The Master's Thesis* from the Graduate School Office. Ordinarily, at least one-half of the degree credits should be earned in courses limited to graduate students (500 level).

Required and Elective Courses — Each program leading to the degree of Master of Education provides graduate students with a curriculum designed to meet their professional needs. Ordinarily, in addition to course work in the area of specialization and related fields, each student must elect for graduate credit at least one course from each of the following areas of professional study:

RESEARCH METHODS AND FINDINGS

Specific course requirements for this area of study are listed under the various departmental M.Ed. program descriptions.

HUMANISTIC STUDIES

ED 480 Philosophy of Education
ED 505 Historical Foundations of Education
ED 580 Philosophical Foundations of Education
ED 583 Directed Study in the Philosophy of Education

BEHAVIORAL STUDIES

ED 520 Psychological Foundations of Education
ED 523 Directed Study in Educational Psychology
ED 590 Sociological Foundations of Education

Additional M.Ed. course requirements are listed under the various departmental program descriptions in this catalogue. All courses to be offered in fulfillment of degree requirements must be approved by the student's advisor.

Comprehensive Examination — All students are required to pass a comprehensive examination. For details, see the paragraph in this section of the catalogue entitled *Comprehensive Examination*.

Certification Information — A number of Bridgewater's Master of Education programs have been approved by the Massachusetts Department of Education for the certification of educational personnel. Specific information regarding such programs is provided in this catalogue under the appropriate departmental program descriptions. For additional details regarding certification program procedures and requirements, students should contact the appropriate graduate program coordinator.

Master of Science

General Requirements — The degree of Master of Science is offered in the field of Physical Education. For information regarding this degree, consult the requirements outlined under the Department of Health, Physical Education, and Recreation.

Certificate of Advanced Graduate Study (CAGS)

General Requirements — Bridgewater's CAGS programs are designed to meet the well defined career needs of professionals who have earned an appropriate master's degree and who wish to attain greater competency in a combination of areas of study within one of the major CAGS fields — Behavioral Sciences, Creative Arts, Education, or Natural Sciences and Mathematics. Each student's CAGS program will be individually planned under the direction of an advisor and will focus on the academic background, present position, and professional needs of the student, constituting an integrated whole rather than a random assortment of courses. By broadening the individual's background, the CAGS aims to develop in the professional increased leadership ability for addressing significant educational and societal issues currently facing the region.

Details regarding the CAGS curriculum, including information about required and elective courses, may be found in the CAGS program description which appear in this catalogue under the Divisions of Behavioral Sciences, Humanities and Creative Arts, Natural Sciences and Mathematics, and Professional Education, respectively. A minimum of thirty approved graduate credits is required for the CAGS, in addition to a one-credit program planning course to be taken under the direction of an advisor upon acceptance in the program. Courses taken for the CAGS may not repeat work previously accomplished by the student in either his or her undergraduate or graduate degree work. Ordinarily, at least one-half of the CAGS credits must be earned in courses limited to graduate students (500 level).

Comprehensive Examination — All CAGS students are required to pass a comprehensive examination. For details, see the paragraph in this section of the catalogue entitled *Comprehensive Examination*.

Doctor of Education

A collaborative Ed.D. program in School Leadership and Administration is offered by Bridgewater State College and the University of Massachusetts at Amherst. For details, see the description of this degree program under the Division of Professional Education.

Program and Course Offerings

General Information

The following section presents the academic divisions of the College and their departments. Each department's undergraduate and graduate programs are outlined, together with a listing of its course offerings.

The course offerings include all courses which are taught at the College—both through the Day Session and the Program of Graduate and Continuing Education. At present, the large majority of the 500 level courses are offered only through the Program of Graduate and Continuing Education. Students are urged to consult the Day Session's *Schedule of Courses* and the Graduate and Continuing Education brochure each semester to see when specific courses are offered.

Students should consult the undergraduate or graduate sections of this catalogue for information on academic regulations applicable to their degree. Regulations concerning the refund policy for tuition and fees are found in the section of this catalogue entitled *Tuition and Fees*.

Course Numbering System

100 - 299	Introductory courses or courses normally taken the freshman and sophomore years.
300 - 399	Courses normally taken in the junior or senior years — open to graduate students unless otherwise noted.
400 - 499	Courses normally taken by seniors — open to graduate students unless otherwise noted.
500 - 599	Open only to graduate students.

Courses which may not be taken by graduate students for graduate credit are indicated as part of each graduate program description.

Usually, courses offered in the fall semester are odd-numbered; those offered in the spring semester are even numbered. Courses offered both semesters usually end in zero.

Prerequisites

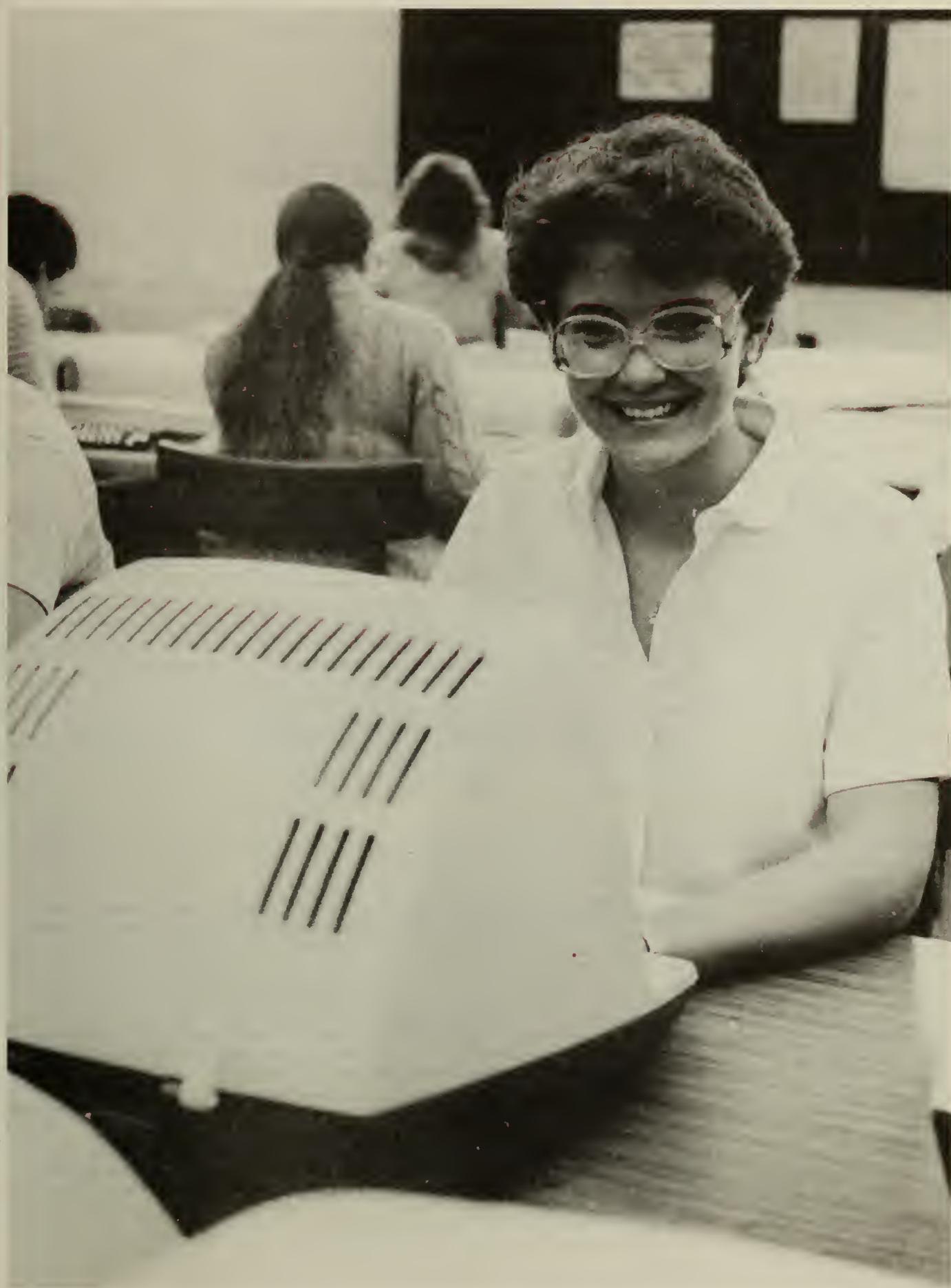
Students should make certain that they have the necessary prerequisites for each course. Failure to do so may result in being inadequately prepared to take the course, and may result in the loss of any credit earned in the course. Prerequisites are indicated in each course description.

Meeting Times

Unless specified otherwise, day session courses meet for three 50-minute periods or two 75-minute periods per week for one semester, and count for three credits. Departures from this rule, such as laboratory and studio periods and quarter courses, are indicated in the course descriptions and schedule of courses.

Courses offered through the Program of Graduate and Continuing Education normally meet once a week for a three-hour period. Exceptions are noted in the Graduate and Continuing Education brochure.





Division of Behavioral Sciences

Psychology,
Social Work,
Sociology and Anthropology

UNDERGRADUATE PROGRAMS

Undergraduate programs of study within the Division of Behavioral Sciences are provided by the Departments of Psychology, Social Work, and Sociology and Anthropology.

Students within the Division receive intensive instruction in the scientific study of cultures, personality, individual and group behavior, social work procedures, and research techniques useful in social work, anthropological, psychological, and sociological study.

Graduates of the Division of Behavioral Sciences find employment in social work and community service agencies, psychological clinics and related settings in urban areas. Some pursue graduate and professional training. Others engage in secondary school teaching.

GRADUATE PROGRAMS

MASTER OF ARTS IN TEACHING

The Division offers a program leading to the degree of Master of Arts in Teaching with a concentration in the behavioral sciences, which is designed primarily to meet the varied needs of graduate students who are currently teaching at the secondary level. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult M.A.T. degree requirements in the Graduate School section of this catalogue), and a minimum of 18 appropriate graduate credits in the behavioral sciences (approved by the program advisor on the basis of the background, interests, and needs of the student).

Applicants to the degree program must be interviewed prior to being considered for admission. Students should contact the Chairperson of the Division's Graduate Committee.

As part of their application to the program, students must show evidence in their background of a minimum of 18 credits in the behavioral sciences (anthropology, psychology, and sociology), with at least 3 credits earned in each of the three fields. In addition, students must have completed a minimum of 3 credits in statistics or computer science.

Behavioral Sciences

Students admitted to the program will be expected to develop a concentration or "specialty" within the behavioral sciences. The concentration or "specialty" will be based upon the interests of each student. In meeting program requirements, the following courses are strongly recommended:

- AN 323 Anthropological Theory
- SO 400 Seminar: Social Theory
- SO 402 Seminar: Research Methods in Sociology
- (One or more of the following courses in psychology)
- PY 310 Social Psychology
- PY 319 History of Psychology
- PY 342 Physiological Psychology
- PY 360 Psychology of Personality
- PY 370 Abnormal Psychology
- PY 415 Psychological Theory
- PY 500 Pro-Seminar in Contemporary Issues in Psychology I
- PY 506 Research Methods and Design I

CERTIFICATE OF ADVANCED GRADUATE STUDY (CAGS)

The Division offers a program leading to a Certificate of Advanced Graduate Study (CAGS) in Behavioral Sciences. This program is designed to meet the varied career needs of professionals who have earned an appropriate master's degree and who wish to attain greater competence in a combination of areas of study in the field of behavioral science. Areas of study offered include psychology, sociology, and anthropology. Ordinarily, the applicant's master's degree must be in an area within the field of behavioral science. Applicants must demonstrate that they possess an academic and experiential background relevant to their field, and must indicate that their needs and goals are in accord with the objectives of the CAGS. All applicants must be interviewed prior to being considered for admission. Students should contact the Chairperson of the Division's Graduate Committee.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Credit requirements will be fulfilled by courses, selected under the direction of the advisor, which clearly meet the student's academic and career needs. Appropriate courses offered outside of the Division will be permitted on a limited basis.

Additional information regarding this program, including application procedures and general academic requirements, may be found in the Graduate School section of this catalogue.

PROPOSED CAGS CONCENTRATION FOR HISTORY/ SOCIAL STUDIES TEACHERS

A CAGS in Behavioral Sciences concentration for history/social studies teachers is being developed jointly by the History Department and the Division of Behavioral Sciences. Designed primarily for students with a history background at the master's degree level, the proposed concentration would provide for additional specialization in history, as well as appropriate interdisciplinary study in the behavioral sciences.

Behavioral Sciences

DIVISIONAL COURSE OFFERINGS

BH 201 Quantitative Methods in the Behavioral Sciences (3 crs.)

The fundamentals of behavioral science research, with application of the scientific method to the particular problems and issues faced by psychologists, anthropologists, and sociologists. Includes hypothesis formulation, research design, data collection analysis and interpretation, and research report. (*Prerequisite: 3 credits required - MA 105 or above -- acceptable by departments within the Division in lieu of MA 110*)

BH 560 Curricular Materials in the Behavioral Sciences (3 crs.)

New course books and other materials planned by national advisory groups of anthropologists, psychologists, and sociologists and produced through long-term projects funded by the National Science Foundation will be presented, with emphasis on clear, objective behavioral scientific materials recommended for immediate use in secondary schools.

BH 599 CAGS Seminar in Behavioral Sciences (3 crs.)

Designed to provide a broad conceptualization of the behavioral sciences, focusing on critical issues facing professionals in the field today.



Department of Psychology

Chairperson: Professor Louis Schippers
Professors: Drake Chisholm, Richard Colgan,
Herbert Greenwald, James Scroggs,
Richard E. Stafford
Associate Professor: Susan Todd
Assistant Professors: Janice D'Avignon, Ruth Hannon,
Margaret Johnson, David Richards, Janet Stubbs

UNDERGRADUATE PROGRAM

BACHELOR OF ARTS/BACHELOR OF SCIENCE

The objectives of the Department of Psychology are to 1) provide all students with an understanding of psychology and what psychologists do; 2) give students (where applicable) a background in psychology that will help them do their job better; 3) give our terminal majors sufficient training to enhance their opportunities for vocational placement in psychology related occupations; 4) give our majors, who intend to become professional psychologists, sufficient preparation to permit them to be competitive in achieving admission and success in graduate schools.

PSYCHOLOGY MAJOR

PY 101, PY 224 or PY 227, PY 252, PY 310, PY 360, and one course from the following: PY 318, PY 324, PY 340, or PY 353. In addition, psychology majors must select five elective courses as follows:

Advanced psychological studies (select one of the following courses): PY 319, PY 415, PY 202, PY 303, PY 404, PY 490 or PY 350;

Biobehavioral, cognitive, and social psychological studies (select one of the following courses): PY 355, PY 356, PY 339, PY 342, PY 344, PY 321, PY 240, PY 210, PY 305, PY 313, PY 385, PY 474 or PY 280;

Clinical studies and Practicum and Research (select one of the following courses): PY 365, PY 370, PY 475, PY 470, PY 369, PY 495, PY 496, PY 492, PY 497, PY 498 or PY 499;

Plus two additional electives: any psychology course.

Also required: MA 110 or BH 201; BI 100 or BI 102, and one of the following: BI 112, BI 171, BI 210, BI 272, BI 273, BI 280 or BI 311; a one-year sequence of foreign language study through the intermediate level or its equivalent.

PSYCHOLOGY MINOR

PY 100 or PY 101 or equivalent and five other psychology courses to fit the needs of the individual students.

INDUSTRIAL- PERSONNEL PSYCHOLOGY CONCENTRATION

This concentration will provide students with an understanding of the psychological principles related to personnel work and the application of these principles to business and industry.

PY 101, PY 227, PY 252, PY 310, PY 360; and one course from the following: PY 318, PY 324, PY 340, PY 353. Additional requirements for Industrial-Personnel Psychology students include: PY 210, PY 303 or PY 404, PY 305, PY 313, PY 321 and PY 496.

MA 110 or BH 201, BI 100 or BI 102, plus one course from the following: BI 112, BI 171, BI 210, BI 272, BI 273, BI 280, BI 311; EN 201, AC 240 or CS 100, SO 350 or SO 332, HI 346, plus one course from the following: CC 452, EC 200. Foreign language through the intermediate level or its equivalent.

Psychology

MEDICAL PSYCHOLOGY CONCENTRATION

This concentration will provide students with an understanding of the psychological principles which delineate and limit a medical model of human health care and the application of those principles, as they are theoretically presupposed derivatives of that model, to clinical medicine and human service areas.

PY 101, PY 227, PY 252, PY 310, PY 360, and one course from the following: PY 318, PY 324, PY 340 or PY 353. Additional requirements for Medical Psychology students include: PY 365, PY 342, PY 344 or PY 355, PY 313, PY 492 and PY 495. For acceptance into PY 495, Practicum: Medical Psychology, and successful completion of the concentration in Medical Psychology--to be designated on students' transcripts--students must fulfill all concentration course requirements, with a minimum of a B average in Psychology and a C average in the cognates.

MA 110 or BH 201; BI 100 or BI 102, plus one course from the following: BI 112, BI 171, BI 210, BI 272, BI 273, BI 280, BI 311; EN 201, PO 272 and PO 277 or PO 385; AN 330, SO 307; PL 205; CH 202 or PH 202; SW 403. Foreign language study through the intermediate level or its equivalent.

It is strongly recommended that all Psychology majors planning further work in psychology at the graduate level take PY 319 and/or PY 415. Such students should also elect courses which will develop their computational and writing skills. In addition, some computer literacy is advantageous.

GRADUATE PROGRAMS

Appropriate courses in psychology may be taken, with faculty advisor approval, in the Division's Master of Arts in Teaching and CAGS programs in Behavioral Sciences. Detailed information regarding these programs, including a list of recommended courses, may be found under the Division of Behavioral Sciences, as well as in the Graduate School section of this catalogue.

PROPOSED MASTER OF ARTS

Plans are currently being made for the implementation of a Master of Arts in Psychology program, to be offered cooperatively with Southeastern Massachusetts University. Final approval by the Board of Regents of Higher Education is required.

At Bridgewater State College, the proposed Master of Arts in Psychology program will offer concentrations in *Industrial-Personnel Psychology* and in *Clinical Psychology*.

- ***Industrial-Personnel Psychology*** is designed for persons who wish to pursue an advanced degree in Psychology to prepare or further prepare for careers in organizations, industry, and government as personnel directors, career development officers, employment specialists, and other positions involving personnel management and administration.
- ***Clinical Psychology*** is a concentration designed to prepare or further prepare qualified students for positions as staff psychologists in both public and private mental health, social, and human service settings, and for related positions in business and industry where clinical knowledge and skills are needed.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all courses below the 300-level, PY 497, PY 498 and PY 499.

Psychology

COURSE OFFERINGS*

- PY 100 Introductory Psychology (3 crs.)**
A survey of the different processes such as perception, sensation, learning, emotion, with a discussion of the underlying physiological processes as well as an introduction to the more complex areas such as personality development, psychopathology, social influences and testing. Methods of investigation and research will be integrated with the above topics.
- PY 101 Foundations of Psychology (3 crs.)**
This course is specifically designed to introduce and familiarize students with the methods and theory of representative thinkers in the major areas of contemporary psychology. Considerations of these thinkers will be examined through their original works as they contribute to current psychological thought and research. Open to all students; required for Psychology majors.
- PY 202 Quantitative Methods in Psychology (3 crs.)**
The fundamentals of psychological research, with emphasis on quantitative methodology and the practical application of appropriate research techniques including: hypothesis testing, research reporting and experimental designs unique to psychology such as multivariate techniques, multiple regression, and factor analysis as well as psychological scaling. (*Prerequisite: PY 100 or PY 101, MA 110 or BH 201, or consent of the Instructor*)
- PY 210 Applied Social Psychology (3 crs.)**
Effective communication and better understanding of oneself; listening, persuasion, conflict resolution, goals, expectations, and self-confidence. Contemporary problems such as dissent and minority problems. Guest speakers when possible. (*Prerequisite: PY 100 or PY 101*)
- PY 224 Child Psychology (3 crs.)**
An investigation of the growth and development of the child from conception to pre-adolescence will include both the influence of heredity and other biological factors as well as the social influences of child rearing practices, family value systems, and peer culture effects. Topics will include the development of verbal ability, conscience and moral judgment, personality and self concept. Current theories and research findings will be discussed in relation to the above topics. (*Prerequisite: PY 100 or PY 101*)
- PY 225 Psychology of Infancy and Early Childhood (3 crs.)**
An investigation of the growth and development of the child from the pre-natal period to the primary grades. Emphasis will be on motor skills as well as perceptual learning, cognitive behavior and socialization with applications to representative problems. (*May not count toward the first 33 hours in the psychology major.*) (*Prerequisite: PY 100 or PY 101*)
- PY 226 Adolescent Psychology (3 crs.)**
An investigation of the growth and development of the pre-adolescent and adolescent including both physical as well as psychological changes relating to intellectual, moral, emotional, personality, and social aspects. Current theories and research findings will be discussed in relation to the above topics. (*Prerequisite: PY 100 or PY 101*)
- PY 227 Development Through the Life Cycle (3 crs.)**
This course offers a survey of the life cycle and an integrated approach to understanding the individual and developmental processes. The developmental tasks of infancy, childhood, adolescence, and adulthood are viewed from a life span perspective, with emphasis on continuity and change. (*Prerequisite: PY 100 or PY 101*)
- PY 240 Sensation and Perception (3 crs.)**
The auditory, visual, gustatory, olfactory, and cutaneous senses will be studied by presenting the basic data with their implications concerning functioning of these systems. The methods for collecting data and the theory concerning such phenomena as perception of movement, time, space, form, pattern, and attention will be presented. (*Prerequisite: PY 100 or PY 101*)

*See page 68 for general information regarding course offerings

Psychology

- PY 251 Human Learning and Memory (3 crs.)**
Applied psychological aspects of motor, skill, and perceptual learning as well as human verbal learning and memory will be explored. Experimental research will be reviewed along with studies of practical application. *For non-psychology majors. (Prerequisite: PY 100 or PY 101)*
- PY 252 Psychology of Learning (3 crs.)**
The shaping of behavior, laboratory conditioning, reinforcement, approach and avoidance of a goal, discrimination and generalization of physical cues, animal learning experiments. Experimental approaches to the study of human behavior. *(Prerequisite: PY 100 or PY 101)*
- PY 280 Consumer Psychology (3 crs.)**
An investigation of the psychological techniques being used in advertising and merchandising. Emphasis will be on the psychological aspects of consumer purchasing practice with respect to motivation, attitudes, learning, and perception. *(Prerequisite: PY 100 or PY 101)*
- PY 303 Survey of Psychological Testing (3 crs.)**
An introduction to the theory of psychological measurement and test development including item indices, speededness, reliability, and validity with a survey of various psychological instruments used in assessment, personnel selection, and psychological research. *(Prerequisite: MA 110 or BH 201)*
- PY 305 Psychology of Personnel Selection (3 crs.)**
The psychology of interviewing, testing and data analysis as it is employed for the effective placement of personnel in business, industry, and other organizations. Includes: criterion selection, job analysis, outcome prediction and validation, and a psychological perspective of jobs and job function. *(Prerequisite: PY 100 or PY 101)*
- PY 310 Social Psychology (3 crs.)**
The individual in social situations: attitude formation and change, culture and society, language and communication, leadership and group dynamics, personality characteristics and interpersonal relationships, small group behavior. *(Prerequisite: PY 100 or PY 101)*
- PY 313 Psychology of Organizations (3 crs.)**
Theories and research, organizational objectives, systems analyses and efficiency planning, quantity and quality of productivity, morale, leadership, personnel selection, career development, committee effectiveness, evaluation research and use of other feedback techniques to improve functioning. Term project: analysis of an existing organization, with recommendations. *(Prerequisite: PY 100 or PY 101)*
- PY 318 Experimental Social Psychology (3 crs.)**
Recent research including developments in methodology, theory, and research findings. Situational approaches and individual differences useful in testing theories and hypotheses in resolving conflicting findings of previous research. Research project required of the student. *(Prerequisite: PY 310 and MA 110 or BH 201)*
- PY 319 History of Psychology (3 crs.)**
A study of the early recognition and historical trends in the study of psychology from the early Greeks through the Renaissance to the 19th and early 20th century schools of thought. Eminent psychologists and their contributions will be integrated with the historical perspective. *(Prerequisite: At least 12 hours of psychology or permission of the Instructor)*
- PY 321 Psychology of Human Differences (3 crs.)**
An introduction to the *ex post facto* method of research and its applications to the investigation of individuals and group differences in normal behavior. The relationship of aptitudes, personality, perception, values, etc., to age, birth order, gender, socio-economic class and race will be studied. Topics range from the origin, development and measurement of individual differences, to their applications in counseling, education, industry, and social work. Opportunity will be given for the student to learn about his or her individual differences. *(Prerequisite: PY 100 or PY 101, BI 102 or equivalent)*
- PY 324 Experimental Child Psychology (3 crs.)**
Students will plan and conduct experiments related to childhood in some of the following areas: motor learning, perception, language acquisition, cognition, and personality development. Proper psychological experimental design will be emphasized. *(Prerequisite: PY 224 and MA 110 or BH 201)*

Psychology

- PY 327 Psychology of Exceptional Children (3 crs.)**
This course will deal with the identification and understanding of children with special needs. Special techniques appropriate to helping these children will be treated. Emphasis will be placed on the psychological problems of the learning disabled, mentally, emotionally, and physically handicapped children as well as those of the academically gifted or creative child. (*Prerequisite: PY 224 or PY 226 or permission of the Instructor*)
- PY 328 Psychology of Mental Retardation (3 crs.)**
Origins (genetic, organic, sensory, maternal, and cultural deprivation), manifestations, diagnostic aids, therapeutic and remedial techniques. (*Prerequisite: PY 224 or consent of the Instructor*)
- PY 329 Psychology of Aging (3 crs.)**
A study of the sensory, cognitive and social changes resulting from old age including changes in learning, personality, and pathology. Problems of adjustment will be discussed and integrated with research findings in gerontology. (*Prerequisite: PY 100 or PY 101*)
- PY 339 Human Information Processing (3 crs.)**
The psychology of thinking including historical and philosophical issues; process models, information theory, cybernetic, general systems and field theory approaches, visual and auditory cognition, psycholinguistics, memory and attention, problem solving and concept formation, with implications for mental retardation and learning disabilities. (*Prerequisite: At least 12 hours in psychology or permission of the Instructor*)
- PY 340 Experimental Psychology: Sensation and Perception (3 crs.)**
Practical experience in laboratory approach to sensation and perception, including design, methodology, and technology. Emphasis is on evaluating and interpreting the practical and theoretical implications of experimental findings for our understanding of human perceptual and thought processes. (*Prerequisite: PY 100 or PY 101, PY 240, MA 110 or BH 201*)
- PY 342 Physiological Psychology (3 crs.)**
A general survey of the neural bases of behavior and current issues of physiological psychology. Topics include: instinctive behavior, biopsychological investigation of learning and motivation. (*Prerequisite: BI 102 or equivalent and PY 100 or PY 101*)
- PY 344 Drugs and Human Behavior (3 crs.)**
An exploration of psychoactive drugs and the way in which they are used in psychology today. Each drug will be studied in terms of the psychological, psychophysiological and behavioral theories of drug effects. (*Prerequisite: PY 100 or PY 101*)
- PY 350 Special Topics in Psychology (3 crs.)**
Various and special topics of current interest in psychology will be offered from time to time. Topics will be announced before pre-registration. May be taken more than once but only three credits will be counted towards the first 33 hours in the Psychology major. (*Prerequisite: At least nine hours in psychology or permission of the Instructor*)
- PY 353 Experimental Psychology: Learning and Motivation (3 crs.)**
Practical experience in laboratory approach to the study of behavior with considerable freedom for student to design his own experiments. Mainly oriented toward issues in learning and motivation: classical and operant conditioning, generalization and discrimination, extinction and transfer, goal-approach and avoidance, effect of drive on performance. (*Prerequisite: PY 100 or PY 101, PY 252, MA 110 or BH 201*)
- PY 355 Behavior Modification (3 crs.)**
Survey of theoretical positions with research, education, clinical and correctional application of a broad spectrum of behavioral principles to the treatment, modification, amelioration, and prevention of behavior and/or learning problems. Although the primary emphasis will be on tactical considerations, the ethical aspects of such techniques will be discussed. (*Prerequisite: PY 100 or PY 101*)
- PY 356 Learning Theory (3 crs.)**
A study of the conditions influencing classical conditioning, operant conditioning, stimulus control, memory, problem solving, and language acquisition. Each topic is to be viewed in terms of current theoretical perspectives. (*Prerequisite: PY 251 or PY 252*)

Psychology

- PY 360 Psychology of Personality (3 crs.)**
Basic concepts in the field of personality, organized around such topics as motivation, personality structure and dynamics, personality development, assessment, and therapy. Problems and styles of adjustments will be considered. (*Prerequisite: PY 100 or PY 101*)
- PY 365 Medical Psychology (3 crs.)**
The application of psychological principles and concepts as they relate to psychological and behavioral problems and conditions related to illness, thus complementing and integrating existing biochemical knowledge of disease with psychological and behavioral techniques that will enhance understanding of health and illness. (*Prerequisite: Minimum of nine hours in Psychology*)
- PY 369 Psychology of Criminal Behavior (3 crs.)**
Definition of criminal behavior and the psychodynamics involved in its causality such as: child rearing practices, personality development, attitude formation, etc. The psychological aspects of punitive vs. rehabilitative incarceration, psychological intervention techniques including behavior modification, psychotherapy and psychodrama, will also be covered. An integration of theory with research findings will be maintained. (*Prerequisite: PY 100 or PY 101*)
- PY 370 Abnormal Psychology (3 crs.)**
A systematic study of behavior pathology. Symptom patterns, etiology, prognosis, and prevention. Understanding and care of mental illness. (*Prerequisite: PY 100 or PY 101*)
- PY 385 Environmental Psychology (3 crs.)**
Examines the interplay between the psychological aspects of man and his physical environment. Topics will include privacy, personal space, territorial behavior, crowding, urban living, as well as the interactions between the physical environment and a variety of social, cognitive, and perceptual behaviors. (*Prerequisite: PY 100 or PY 101*)
- PY 404 Attitude and Personality Measurement (3 crs.)**
Principles of construction of attitude scales and personality assessment techniques, including both projective and inventory-type techniques. Issues and controversies in psychological measurement. (*Prerequisite: PY 360, PY 310, and MA 110 or BH 201*)
- PY 415 Psychological Theory (3 crs.)**
Fundamental assumptions underlying the psychological enterprise, and issues which are the subjects of continuing debate in the field - e.g. causality, determinism, methodological approaches, the control of behavior, conceptions of the nature of man. (*Prerequisite: At least 12 hours in psychology*)
- PY 470 Clinical Psychology (3 crs.)**
Survey of diagnostic and treatment procedures and resources in clinical work with children and adults; professional skills and responsibilities of the clinical psychologist. (*Prerequisite: PY 360 and PY 370*)
- PY 474 Forensic Psychology (3 crs.)**
A study of basic underlying assumptions of personality theory such as intentionality, nature/nurture and the knowability of man as these issues pertain to motive and bias as they manifest themselves in a judicial system. (*Prerequisite: PY 360, PY 370*)
- PY 475 Psychology of Group Behavior (3 crs.)**
Group theory, theories of group psychotherapy, leadership and facilitation, group process; plus laboratory experience in interpersonal relations designed to develop skills useful in human services applications. Open only to senior psychology majors with consent of the department.
- PY 490 Senior Seminar (3 crs.)**
Topical areas of psychology will be offered to allow seniors an opportunity to make individual presentations and critique each other through discussion. Topics will be announced in advance. May be taken twice but only three credits will be credited toward the first 30 hours for psychology majors. (*Prerequisite: 18 hours in psychology or consent of the Instructor*)
- PY 492 Seminar: Medical Psychology (3 crs.)**
Examination of issues and problems in Medical Psychology. (*Prerequisite: PY 365 and consent of the Department*)

Psychology

- PY 495 Practicum: Medical Psychology (3-15 crs.)**
Open to seniors in Medical Psychology Concentration, providing first-hand experience in the application of psychological and behavioral principles in the area of medical psychology. (*Prerequisite: Consent of the Department*)
- PY 496 Personnel Practicum* (3-15 crs.)**
Direct application of psychological principles to actual personnel issues and problems in an organization such as business, industry, government, etc. Open only to seniors who wish to gain first-hand experience. (*Prerequisite: Consent of the Department*)
- PY 497 Research* (1-3 crs.)**
Individual or group research project. Primarily for senior majors in psychology; others by special arrangement. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- PY 498 Clinical Practicum* (3-15 crs.)**
Open to seniors to which to have the opportunity to gain first-hand experience in applying psychology in a clinical setting. (*Prerequisite: Consent of the Department*)
- PY 499 Directed Study in Psychology * (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- PY 500 Pro-Seminar in Contemporary Issues in Psychology I (3 crs.)**
An in-depth background in the major fields and areas of psychology for the behavioral scientist/practitioner. In four week blocks, topical areas are presented which are of relevance to those working in the fields of psychology.
- PY 501 Pro-Seminar in Contemporary Issues in Psychology II (3 crs.)**
A continuation of the in-depth background in the major fields and areas of psychology for the behavioral scientist/practitioner. In four week blocks, topical areas are presented which are of relevance to those working in the fields of psychology. (*Prerequisite: PY 500*)
- PY 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- PY 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- PY 506 Research Methods and Design I (3 crs.)**
An experiential-based course in statistics for a behavioral scientist/practitioner.
- PY 507 Research Methods and Design II (3 crs.)**
An experiential-based presentation of experimental design adapted for use by the behavioral scientist/practitioner. (*Prerequisite: PY 506*)
- PY 508 Advanced Seminar (3 crs.)**
Various and special topics of current relevance in psychology, to be dealt with in depth, will be offered from time to time. Topics will be announced before pre-registration. May be taken more than once but only three credits will be counted towards the graduate program. (*Prerequisite: Consent of the Instructor*)
- PY 512 Attitude Change Research (3 crs.)**
Empirical research in persuasion; communicator credibility, opinion difference, commitment, one-sided (pro) and two-sided (pro and con) arguments, coercion, threat, emotional and rational arguments. Theories of attitude change, including dissonance theory, balance theory, congruity theory, and assimilation and contrast theory. (*Prerequisite: PY 310, MA 110 or BH 201 or equivalents; consent of the Instructor*)

*No more than six hours of any combination PY 497, PY 498 or PY 499 may be counted towards the first 33 hours in the psychology requirements for a major.

Psychology

- PY 515 Controversies in Social Psychology (3 crs.)**
In this seminar, students, working in teams, will present a summary of the research and theoretical literature related to a particular topic in social psychology. The presentation will include research evidence and theories supporting opposing viewpoints. Also included in the presentation will be students' own conclusions based on the weight of the evidence and a suggestion for a specific research study that could help clarify the problem. (*Prerequisite: PY 310 (Social Psychology) or its equivalent*)
- PY 520 Theories of Development (3 crs.)**
Contrast and compare the major models of development: cognitive-structural, psychoanalytic, and behaviorist, with special emphasis on their a priori assumptions and research strategies. Works of Piaget, Werner, Freud, Erikson, Skinner, Spence, and others will be examined. (*Prerequisite: PY 224, PY 360 or equivalent; consent of the Instructor*)
- PY 525 Cognitive Development (3 crs.)**
The development of the cognitive processes, including perception, language, intelligence, and memory. Throughout the life cycle the major focus will be on the growth of basic systems and strategies for representing information symbolically. The work of cognitive theories such as Berlyne, Bruner, and Piaget will be considered. (*Prerequisite: PY 224 or equivalent; consent of the Instructor*)
- PY 526 Childhood Psychopathology (3 crs.)**
The nature, etiology, consequences and prevention of the major emotional disorders of children, considered from a developmental viewpoint. Areas include emotional problems of normal children as well as serious psychopathology. Primary emphasis is on psychological factors responsible for deviance. Some attention to organic and constitutional factors. (*Prerequisite: PY 224, PY 327 or equivalents*)
- PY 528 Seminar in Clinical Child Psychology (3 crs.)**
Examination of theoretical foundations and principle techniques used in the assessment and treatment of psychological problems of children. Emphasis will be placed on the unique needs of children in assessment and treatment. (*Prerequisite: PY 224 and PY 327 or PY 526*)
- PY 540 Cognitive-Perceptual Psychology (3 crs.)**
An in-depth examination and review of the scientific literature concerned with cognitive-perceptual issues, principles, and theories, integrating perception, learning, memory, language, and thinking. Materials will be evaluated with pragmatic regard to experimental, medical, clinical, and educational settings. (*Prerequisite: PY 240, PY 252 or equivalent, or consent of the Instructor*)
- PY 570 Theories of Psychotherapy (3 crs.)**
This course offers the advanced student an opportunity to further his or her understanding of the process of change in psychotherapy. At the CAGS level, it is assumed that the student will be engaged in therapeutic work at his or her professional work setting. (*Prerequisite: PY 575, PY 576, PY 573, or equivalents*)
- PY 572 Community Psychology and Mental Health (3 crs.)**
Examination of principles, literature, and practices of community mental health work and preventive psychiatry. Therapeutic methods in individual, couple, family and group work considered as well as the role of consultation and the community mental health center. (*Prerequisite: PY 360 and PY 370*)
- PY 573 Evaluation Techniques (3 crs.)**
This course offers the advanced student the opportunity to examine the important appraisal stage of working with clients. Appraisal is extremely important before appropriate interventions can be determined. (*Prerequisite: PY 575, PY 576 or equivalent*)
- PY 574 Family and Marital Therapy (3 crs.)**
Students in the CAGS program work in local mental health or human services agencies, or school systems. Knowledge of the theory and practice of family therapy would be beneficial to their work in assessment, intervention, and case management. (*Prerequisite: Consent of the Instructor*)
- PY 575 Neuroses and Personality Disorders (3 crs.)**
Students preparing for work in mental health settings need depth knowledge about this clientele with which they will work. This course goes beyond PY 370 Abnormal Psychology by focusing on one aspect of abnormality. (*Prerequisite: PY 370 or equivalent*)

Psychology

PY 576 The Psychoses (3 crs.)

Students preparing for work in mental health settings need depth knowledge about this clientele with which they will work. This course goes beyond PY 370 Abnormal Psychology by focusing on one aspect of abnormality. (*Prerequisite: PY 370 or equivalent*)

PY 577 Psychodynamic Theory: Object Relations (3 crs.)

This course is an examination of the current psychodynamic approaches to understanding psychopathology. Included in the course will be the work of the ego psychologists, object relations theorists, and those working with borderline and narcissistic conditions. (*Prerequisite: Completion of core prerequisites in MA program*)

PY 578 Psychodynamic Psychotherapy (3 crs.)

This course examines the philosophy and the technology of change according to psychodynamic theory. Included will be an examination of the concepts of health, pathology, and change as well as the major aspects relevant to psychotherapy: interpretation, the role of transference and countertransference and the development of the "working alliance" between the client and the therapist. (*Prerequisite: Completion of PY 577*)

PY 590 Clinical Practicum (credit to be arranged)

While perhaps the majority of students entering a CAGS program will already be actively working in their respective career areas, there will be some students seeking to extend their knowledge and skills into clinical areas, as well as those who have not previously had active involvement in clinical work and will require it for jobs, promotions, etc. PY 590 is intending to offer such students suitable placements and supervision with respect to their particular needs. (*Prerequisite: Consent of the Department*)



Dr. Herbert Greenwald, Professor of Psychology

Department of Social Work

Acting Chairperson: Associate Professor Betty Mandell
Assistant Professors: Dorothy Howard, Rebecca Leavitt
Instructor: Mariah Childs

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS/BACHELOR OF SCIENCE

The objective of the social work major is to prepare undergraduate students for beginning professional positions in the field of social work and other human service fields. The program will also prepare students for professional training in social work at the graduate level.

Behavioral theory derived from courses in anthropology, psychology, and sociology undergird the instruction provided in the social work courses. The program includes a field experience in social agencies, where students perform field-work assignments. A field work seminar is taken concurrently with the field experience.

Preparation for the senior year Field Experience, SW 498, is accomplished through a series of structured exercises attached to courses. SW 250, Introduction to Social Welfare, may require a 2-4 hour laboratory experience for a semester; SW 311, Social Work Practice: Theory and Method, requires 8 hours a week volunteer experience for one semester. These experiences are designed to assist the faculty and the student in the selection of an appropriate senior field experience.

The following criteria have been established as minimum prerequisites for admission and retention in the senior field experience course, SW 498:

1. Documentation that the student has achieved a grade of "C" or better in English Composition. If the student is required by college regulations take English Composition II, a "C" or better must be achieved in the latter course;
2. Documentation that, by the first semester of the junior year, a student is maintaining a QPA of 2.2 or better;
3. Documentation that no more than one "Incomplete" grade will be carried into the senior year (that is, during the year-long field internship) unless satisfactory medical certification supporting the need for same provided. In no situation will a student be allowed to carry more than two such "Incomplete" grades into the senior year;
4. Agreement by a majority of the department that the student gives behavioral evidence of the maturity and mental stability necessary to satisfactorily perform the role of professional social worker.

SOCIAL WORK MAJOR

SO 202, AN/SO 315, SO 400, SO 402, SW 250, SW 300, SW 310, SW 311, any two from SW 314 or SW 324 or SW 325, SW 409, SW 410, SW 498, MA 110 or BH 201, PY 100 or PY 101, PY 360, PY 370 and one semester in Biology.

An intermediate-level proficiency in a foreign language, ordinarily in Spanish or Portuguese, is required. In addition, Social Work Majors must elect one semester of Biological Science from the 2 semester Natural Science General Education Requirement.

GRADUATE PROGRAM

The Department of Social Work does not offer a program at the master's degree level. Social Work courses, except SW 250 and SW 499, may be taken for graduate credit in order to meet elective requirements in other graduate programs with faculty advisor's approval.

Social Work

COURSE OFFERINGS*

None of these courses may be used to satisfy general education requirements.

- SW 250 Introduction to Social Welfare (3 crs.)**
Analysis of the conceptions of social welfare. The historical development and function of social welfare and the value systems underlying the political, economic and social response to human needs. An overview of the roles of the social worker and the varied settings in which interventions are employed. (*Prerequisite: SO 202 or AN 201 or PY 100*)
- SW 300 Social Welfare Policy (3 crs.)**
This course follows the development of social welfare institutions and the societal response to human service needs. There is discussion of poverty and its effects on minority groups with special emphasis on Afro-Americans, Spanish-speaking, women and the aged. (*Prerequisite: SW 250*)
- SW/HE 303 Interdisciplinary Approaches to the Delivery of Health Services (3 crs.)**
A wide range of interdisciplinary health team approaches will be analyzed. The field component is observational and will provide insight into the pragmatic realities of a health team. This course will be a first exposure to the theoretical and experiential dynamics of interdisciplinary approaches to delivery of health services. Disciplines involved include social work, health, psychology, nursing and medicine. (*Prerequisite: 6 credits in Health and Social Work or Health-related areas*)
- SW 305 Child Welfare (3 crs.)**
A comprehensive study of the principal child welfare services. Focus will be concentrated around the human service practitioners' role as a helping agent in the delivery of services. The impact of child welfare on areas of education, sociology, psychology, health and mental health will include aspects of these disciplines as they relate to enhancing the welfare of the child. Learners will make site visits to child welfare agencies and interview professionals providing services to children. (*Prerequisite: Minimum of six credits from SW 250, PY 100, SO 202, HE 101, SW 310, PY 224, SO 302, HE 102*)
- SW 310 Human Behavior and Social Environment (3 crs.)**
An examination of the biological, psychological, and social development of the individual throughout his life span, and the relation of these factors to the individual's functioning in his environment. Special emphasis on the implications for social work practice. (*Prerequisite: SW 250*)
- SW 311 Social Work Practice: Theory and Method (3 crs.)**
A descriptive overview of the field of social work practice. The following topics will be approached from a generic standpoint: concepts and techniques in practice, with individuals, groups and communities, interviewing, roles of workers and clients, social process, problem solving and skill development. Emphasis on role-play as a learning aid. A semester-long volunteer experience in a social agency is a course prerequisite. (*Prerequisite: SW 250, 300, 310, or permission of the Instructor*)
- SW 314 Social Work Practice with Individuals (3 crs.)**
The course will integrate knowledge of assessment skills and intervention approaches that will enable individuals and their families to better deal with various internal and social pressures in their life situations. A solid foundation for relationships building and interviewing skills will be provided. (*Prerequisite: SW 311*)
- SW 324 Social Work Practice with Groups (3 crs.)**
Basic concepts, principles, techniques, and approaches used in offering services to groups. A variety of agencies providing group service will also be examined. Role play will be employed as a learning aid. (*Prerequisite: SW 311*)
- SW 325 Social Work Practice in Community Organizations (3 crs.)**
Presentation and discussion of concepts, principles, methods and techniques of providing human services and upgrading neighborhoods and communities. (*Prerequisite: SW 311*)

*See page 68 for general information regarding course offerings

Social Work

- SW 327 Social Work Practice with Women, Minorities, and the Poor (3 crs.)**
The study of the special knowledge and sensitivity necessary for social workers in serving women, minorities, and the poor. Social work practice, social policy and social services will be examined in relation to class gender and ethnicity. (*Prerequisite: SW 250*)
- SW 399 Special Topics in Social Work (3 crs.)**
Various topics in Social Work will be offered from time to time. Topics will be announced prior to registration. May be taken more than once. (*Prerequisite: 9 hours in Behavioral Sciences*)
- SW 403 Social Services in the Health Care Field (3 crs.)**
The course will provide an historical overview of medical social work with emphasis upon the psychological and social aspect of medical care. A variety of health care settings will be analyzed in terms of social work role, treatment approaches, resource finding and interdisciplinary work. Students will be given an understanding of how both acute and chronic illness affect the patient, family and community with emphasis upon such variables as age, sex, ethnicity, and duration and nature of condition. (*Prerequisite: At least 6 hours at 300, 400 level Behavioral Sciences or Health. Open to declared majors in Behavioral Sciences or Health*)
- SW 409-410 Field Work Seminar I-II (3 crs. for each semester)**
In conjunction with a supervised field experience in a community agency, this seminar will provide an integration of social work theory garnered from previous courses with practice issues arising from the field internship. The diversity of social work settings and roles will be shared along with specified content and guest speakers from each area of practice. (*Prerequisite: Social Work Majors only*)
- SW 415 Social Services in Alcohol and Substance Abuse (3 crs.)**
The course provides an overview of the problem of alcoholism, and the various programs designed to deal with the problem. It has been designed primarily for students who have an interest in the area of alcoholism and substance abuse and may be considering a career in treatment for alcoholism or merely wish to expand their area of competence. The course focuses on the central issues of causation, resources, management and treatment from a social work perspective. Students need to understand how the various programs and human service systems are designed, planned, organized and evaluated. Students are introduced to theory and practice in relation to the functions that form the basis of various programs and services. Agency visits will be made. (*Prerequisite: SW 250*)
- SW 498 Field Experience in Social Work (3 or 4 crs. for each semester)**
Taken concurrently with SW 409 and SW 410, Field Work Seminar I-II, during the senior year, these practice aspects of the social work curriculum help students to learn to integrate social work theory and practice into a unified whole as a part of their development toward professional roles. The field experience provides opportunities for students to learn how to apply acquired knowledge and to develop skills in providing direct services to clients in a wide variety of community agencies, under the direction of a qualified agency field instructor. A total of 300 clock hours in the field is required to be fulfilled from September-May of the senior year. Variable credits applicable only to semesters prior to 1987. (*Prerequisite: Social Work Majors only*)
- SW 499 Directed Study in Social Work (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)

Department of Sociology and Anthropology

Chairperson: Professor Abraham Thomas

Sociology Faculty

Professor: Morgan Brown

Associate Professors: Donald Armfield, William Levin,
Nancy Meymand

Assistant Professor: Howard London

Anthropology Faculty

Associate Professors: Curtiss Hoffman, Richard Swiderski

Assistant Professor: Reed Stewart

UNDERGRADUATE PROGRAMS

ANTHROPOLOGY

BACHELOR OF ARTS/BACHELOR OF SCIENCE

A Major in Anthropology provides students with an understanding of societies and cultures throughout the world. Specifically: 1) A major prepares students for teaching careers in either elementary or secondary schools and/or college teaching or research. 2) It prepares students for careers in industry. 3) It offers a general background to students who are interested in jobs with state or federal agencies. 4) It provides a background for students to become educated, well informed adults. Majors are encouraged to continue study for advanced degrees (M.A. or Ph.D.) because those individuals are more likely to be selected for positions in the field.

A concentration in public archeology is designed to provide the basic knowledge and training necessary for careers in contract archeology and cultural resource management. The program introduces students to the history of the development of public archeology and to the study of federal, state and local legislation protecting archeological resources. The concentration relies heavily on cognate course in geology and geography.

ANTHROPOLOGY MAJOR

a) *Cultural Anthropology Concentration*

Requirements: AN 201, AN 202, AN 321, AN 323 and six other courses in Anthropology
Cognate requirements: BH 201 or MA 110 or CS 100

A one-year sequence of foreign language study at the intermediate level, or its equivalent.

b) *Public Archeology Concentration*

Requirements: AN 201, AN 202, AN 302, AN 306, AN 328, AN 410, AN 323 or AN 333,
nine credits of field work (AN 303 plus AN 332 or AN 303 plus three credits of Directed
Study in the field) and one other course.

Cognate requirements: ES 100, ES 101; MA 110 or BH 201; and three courses from
ES 102, ES 194, ES 284, ES 462, ES 466, ES 476, GE 216, GE 217, or BI 313.

A one-year sequence of foreign language study at the intermediate level, or its
equivalent.

ANTHROPOLOGY MINOR

18 credits in Anthropology as recommended by the Department.

Sociology & Anthropology

SOCIOLOGY

BACHELOR OF ARTS/BACHELOR OF SCIENCE

Human beings interact in several ways with other human beings and construct patterns of relationships, groups, classes, institutions, and societies. We are individuals but necessarily participate in and are shaped by the large number of relationships that constitute social reality. The sociological perspective focuses on these social relationships.

The objective in all courses is to provide the student with an understanding of how these social relationships arise, why they persist, what effects they have, how they maintain social order or contribute to social change. This understanding is provided by means of classroom learning of the theories and methods of research used by the practitioners of sociology and by internship practices in the field, where the student is expected to apply or deepen classroom learning. This objective is designed with the hope that it will facilitate the student's entrance into the labor market or graduate school.

SOCIOLOGY MAJOR

SO 202, SO 400, SO 402 plus a minimum of seven other courses in Sociology.
MA 110 or BH 201.

SOCIOLOGY MINOR

18 credits in Sociology as recommended by the Department.

CRIMINOLOGY CONCENTRATION

The Sociology Major with a concentration in Criminology is designed for students who are considering possible careers in the diverse area of the administration of justice. The program introduces and sensitizes students to the different dimensions and explanations of crime and delinquency, as well as provides analyses of structural sources and the legislative process involved in the formulation of the criminal law.

Requirements: SO 202, SO 304, SO 327, SO 328, SO 334, SO 354, SO 355, SO 384, SO 400, SO 402

A field work placement assignment of 3-15 hours is strongly recommended.
Cognate requirements: HE 305, PY 369.

THIRD WORLD STUDIES CONCENTRATION

Students selecting this concentration will study selected Third World societies: their institutions, social structure, development and changing place in the world.

Requirements: SO 202, SO 319, SO 320, SO 335, SO 400, SO 402, SO 310 or SO 321, SO 302 or SO 312 or SO 340, SO 498 (for six semester hour credits).

Cognate Requirements: AN 202, plus AN 306 or AN 310 or AN 321, plus any two of the following: HI 324, HI 329, HI 348, HI 393, PO 382, PO 387 (plus any applicable prerequisites).

GRADUATE PROGRAMS

Appropriate courses in anthropology and sociology may be taken, with faculty advisor approval, in the Division's Master of Arts in Teaching and CAGS programs in Behavioral Sciences. Detailed information regarding these graduate programs, including a list of recommended courses may be found under the Division of Behavioral Sciences, as well as in the Graduate School section of this catalogue.

PROPOSED MASTER OF ARTS

Plans are in progress for a Master of Arts in Sociology program to be offered by Bridgewater State College. Final approval of this proposed program by the Board of Regents of Higher Education is required.

The proposed Master of Arts in Sociology is designed for individuals preparing or further preparing for careers involving planning and policy decisions in business and industry, human services, research, teaching, and government.

The departmental offerings listed below include courses which may not be taken for graduate credit: all anthropology courses below the 300 level, AN 498, AN 499; SO 202, SO 330, SO 498, and SO 499.

Sociology & Anthropology

COURSE OFFERINGS*

ANTHROPOLOGY

Any 200 level Anthropology course may be used to satisfy General Education Requirements.

- AN 201 Introduction to Physical Anthropology (3 crs.)**
Divisions of anthropology. Primate evolution and behavior. Origins and physical and cultural development. Concepts of racial variation.
- AN 202 Introduction to Cultural Anthropology (3 crs.)**
Human cultural variability. Human societies of the past and present around the world. The problem of ethnocentricity. Basic concepts and methods of analyzing cultures.
- AN 205 Culture Change (3 crs.)**
Use of the inductive approach to examine the effect of culture on individuals and groups. Discussion and study of applied anthropological techniques used in planned programs to assist in adopting social change.
- AN 207 Anthropology of Religion (3 crs.)**
The origins and development of religion in society; myth, ritual, magic, and religious specialists. Australian, African, and American Indian.
- AN 210 Introduction to Folklore (3 crs.)**
The meaning and subdivisions of folklore, myth, folktale, proverb, riddles. Analyses of story elements and major folklore areas.
- AN 211 Myth and Culture (3 crs.)**
The cross-cultural approach to world mythology. Myths of our own and other cultures will be analyzed using the methods of Levi-Strauss and Jung. Myth will emerge as a fundamental human function, necessary for the well-being of both cultures and individuals.
- AN 302 Introduction to Archeology (3 crs.)**
Examination of field methods, systems of data recording, analytical methods, and their conceptual basis. Abstract theory closely integrated with specific case material. Laboratory exercises in application of artifact analysis. (Offered in summer only)
- AN 303 Archeological Field Excavation in Prehistoric Sites in New England (6 crs.)**
Intensive training in excavation techniques, field recording, and primary cataloguing and analysis of archeological materials. (Offered in summer only) (*Prerequisite: Consent of the Instructor*)
- AN 304 Personality and Culture (3 crs.)**
A study of the interrelationships between individual and society, focusing on major theories about the formulation of personality by the surrounding structures, including: a cross-cultural study of childhood; adolescence in changing American personality as compared with personality structures in traditional society.
- AN 306 Native Cultures of North America (3 crs.)**
A cross-cultural study of the tribal cultures of the United States, Canada, and Mexico. Emphasis will be placed on the understanding of Native American cultural systems and on the current state of Native American interaction with governmental policies and attitudes.
- AN 307 Urban Anthropology (3 crs.)**
The study of urban culture using anthropological fieldwork methods.

**See page 68 for general information regarding course offerings*

Sociology & Anthropology

- AN 309 Anthropology of Art (3 crs.)**
This course will consider particular art forms in their cultural contexts. It will begin with forms considered conventional by Western standards - painting and sculpture - and examine them in prehistory and in non-Western contexts. Then the artistic properties of crafts and other types of production not usually accepted as art will be studied: masks, pottery, tools, house plans, arrangements of objects, ritual, the role and philosophy as well as the mystique of the artist will be contrasted in a number of contexts. The imposition of Western art ideology on native cultures, the creation of syncretic and tourist art will be used to epitomize the ongoing interests of anthropology of art.
- AN 310 Peoples and Cultures of Africa (3 crs.)**
A survey of the multiplicity of ways in which contemporary societies, rural and urban, arrange their ways of life in a rapidly changing Africa.
- AN 311 The Emergence of Cities (3 crs.)**
A study of the development of urban centers out of a Neolithic subsistence base, both in the nuclear Near East and in the New World. This course will focus on the problems of urban life in antiquity, with special reference to those problems which may be found in modern cities. Attempted solutions will be evaluated with an eye to their applicability in modern situations.
- AN/SO 315 Ethnic Experience in America (3 crs.)**
This course considers the role of ethnic background in personal and social relationships. The varying interpretations of ethnic culture--its formation and growth in America--are examined while each student looks into his or her personal heritage and the role of tradition in contemporary life.
- AN 321 Comparative Social Structures (3 crs.)**
A comparison of social structures of selected non-Western societies. Stress is placed upon the meaning of society, structure, and analytical methods of comparison.
- AN 323 Anthropological Theory (3 crs.)**
A survey of the early schools of cultural theory including Adolf Bastian, Lewis Morgan, Edward B. Tylor, the British Diffusionists, The German Historical-Diffusionist School, French Sociology. Functionalism, including Franz Boas to Levi-Strauss. Current theory. (*Prerequisite: AN 202, AN 207, or AN 210*)
- AN 328 Archeology of North America (3 crs.)**
The development of prehistoric and proto-historic Native American cultures. Cultural dynamics of hunting-gathering and maize agriculture. Theories of the peopling of the continent will be evaluated.
- AN 330 Medical Anthropology (3 crs.)**
The course concentrates on health, illness, and healing in cross-cultural perspective. It will examine ways in which culture mediates ideas of physical well-being, and will be aimed at dispelling belief in the absolute truth of medical dogma, teaching students to think outside their own cultural biases. It begins with a consideration of body image in a range of different cultures and then proceeds to the varying rationales for normal function and for dysfunction. The healing process as ritual and as scientific procedure, including the theory and practice of healing in different cultures, figures into the course, as does the training and outlook of healers--doctors, priests, shamans, nurses, midwives, and others. Finally, the medical systems of several cultures, ancient and modern, industrialized and pre-industrial are compared.
- AN 332 Practicum in Field Archeology (3 crs.)**
Experiential training in the practical skills of field archeology. Direction in site survey, excavation tactics and strategy, fieldwork supervision, methods of sampling and on-site analysis. Introduction to laboratory work: cataloguing, recognizing lithic materials, metric measurement, and flotation of organic samples. (*Prerequisite: AN 302 (to be taken concurrently), AN 303, or consent of the Instructor*)
- AN 333 Archeological Theory (3 crs.)**
A seminar course dealing with theories of archeology from the late 19th century to the present, including the ideas of Petrie, Childe, Wheeler, Taylor, Braidwood, Rouse, Binford, Flannery, Redman, and Trigger. The course will address opportunities and problems arising from the introduction of the "New Archeology" in the early 1960's and will attempt to reconcile these new ideas with their predecessors. (*Prerequisite: AN 302*)

Sociology & Anthropology

- AN 350 Special Topics in Anthropology (3 crs.)**
Various and special topics of current interest in anthropology will be offered from time to time. Topics will be announced before pre-registration. May be taken more than once but only three credits will be counted towards the first 30 hours of the major. (*Prerequisite: Three hours in anthropology or permission of the Instructor*)
- AN 410 Public Archeology (3 crs.)**
An introduction to the field of Public Archeology, its history of development. Emphasis will be placed on the basic knowledge and training necessary for careers in contract archeology and cultural resource management: 1) to introduce students to the history of the development of public archeology; 2) to study the federal, state, and local legislation protecting archeological resources; 3) to provide administrative training for doing contract archeology - contract and research proposal development, report writing, Environmental Impact Statement interpretation - and to provide a basic background for cultural resource management careers. (*Prerequisite: AN 302*)
- AN 498 Field Experience in Anthropology (3-15 crs.)**
The field experience provides an opportunity for students to apply methods of fieldwork in ongoing societies; to design field studies; to learn methods for collection and analysis of empirical data; and to participate in experimental field projects. (*Prerequisite: Consent of the Instructor*)
- AN 499 Directed Study in Anthropology (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- AN 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- AN 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- AN 510 Symbolic Anthropology (3 crs.)**
The course considers symbols in the context of anthropological theories of culture, and is divided into two sections: on the nature of symbols and on the symbolic analysis of cultural institutions. The origin of symbols, their universality and variability are taken up in the first section while their role in ritual, language, social organization and other cultural systems is studied in the second section. (*Prerequisite: AN 202 or any introduction to cultural anthropology*)
- AN 520 Ethnographic Film (3 crs.)**
The course compares written ethnography with the increasingly important medium of film ethnography and identifies the unique features of film as a means of communicating conclusions about culture. Emphasis is on the attributes of ethnography on film: viewpoint, editing, time sequence, setting, documentation. Students will read ethnographies and view selected films presenting the same cultures.
- AN 525 Problems of New England Archeology (3 crs.)**
An intensive seminar course in local prehistory, exploring the cultural and environmental evidence for settlement and subsistence patterns in the Northeast. Important considerations will include how we know what we know, and why we currently do not know more about the prehistoric inhabitants of this area. Individual research papers will be assigned. (*Prerequisite: AN 302, AN 303, AN 328, or equivalent*)
- AN 526 Cultural Resources Management (3 crs.)**
For graduate students seeking employment in the field of conservation archeology. A detailed survey of the techniques and importance of cultural resource management, including archival research, field strategies, conservation of finds, report writing, and archeological legislation. Individual research papers will be assigned. (*Prerequisite: AN 302, AN 303, AN 333, AN 411 or equivalents*)
- AN 590 Seminar: Community Cultures in Southeastern Massachusetts (3 crs.)**
Examination of cultural traditions, changing beliefs and institutions, current folklore, and oral traditions in relation to specific ethnic, political, and economic groupings in southeastern Massachusetts.

Sociology & Anthropology

SOCIOLOGY

- SO 202 Introduction to Sociology (3 crs.)**
Social structure, basic human institutions, analysis of social processes, major social forces.
- SO 302 Social Problems (3 crs.)**
Contemporary social problems which are reflected in the behavior of individuals, but whose origins and causes lie outside of individuals. Topics treated will include drug abuse, crime, juvenile delinquency, divorce and other family problems, mental illness and other health problems, social class, and selected social issues.
- SO 303 The Family (3 crs.)**
The family as a social institution in terms of its historical and cultural development. Analysis of psychological and social factors in contemporary family life.
- SO 304 Social Stratification: Class, Status and Power in America (3 crs.)**
Historical and contemporary examples of the range of stratification systems. Problems of class and caste conflicts. Trends in class system and social mobility, with special attention given to similarities and differences of modern industrial societies.
- SO 305 Sociology of Education (3 crs.)**
Educative factors in the social process. Some attention will be given to preliterate cultures and the functioning of the dominant institutions. Major emphasis on the relation of stratification to education, and of education to horizontal and vertical mobility. Social class and ethnic backgrounds will be examined for their relationship to the functioning of schools. Recent well-known empirical findings will be discussed.
- SO 306 Urban Sociology (3 crs.)**
A sociological and ecological analysis of the city in terms of urban institutional and personality patterns, folkways and mores. Ecological processes and structures. The city as a center of dominance over a trade area and hinterland. (*Prerequisite: SO 202*)
- SO 307 Medical Sociology (3 crs.)**
Concepts of health, illness, disease, and health care analyzed from the perspectives of patient (client), practitioner and relevant third parties. Medicine will be analyzed as a social system, with attention to factors in the physical and sociocultural environment, and case materials will be drawn from non-Western as well as Western societies. (*Prerequisite: SO 202, or permission of the Instructor*)
- SO 308 Sociology of Religion (3 crs.)**
Comparative study of religious systems and institutions; function and role of religion and the church in society; professional status, history and relations of the clergy.
- SO 310 Society and Culture in Modern India (3 crs.)**
A descriptive and analytical examination of societies of the Indian subcontinent dealing with their cultural histories, economic, social, political and religious institutions. Problems of cultural and social change. *Course may be used to satisfy requirements for Anthropology majors and minors.*
- SO 312 Sociology of Prejudice and Discrimination (3 crs.)**
A study of the relationship between majority and minority groups in America, with attention to the domination of categories of people on the basis of their race, sex, age, ethnicity, and/or religion. Theories and data will be presented concerning the development, maintenance and operation of discrimination and prejudice, and the relationship between them.
- SO/AN 315 Ethnic Experience in America (3 crs.)**
This course considers the role of ethnic background in personal and social relationships. The varying interpretations of ethnic culture--its formation and growth in America--are examined while each student looks into his or her personal heritage and the role of tradition in contemporary life.

Sociology & Anthropology

- SO 319 Population and Society (3 crs.)**
The mutual influence of demographic factors and social structure. Trends in population growth and their relationship to industrialization, urbanization and economic development. Current trends in population growth and their implications for developing nations as well as for developed nations. Relationship between population and environmental problems. Methods and problems of population control.
- SO 320 The Sociology of the Third World (3 crs.)**
An introduction to the sociological aspects of development in the developing countries of Asia, Africa, and Latin America. Relationship of industrialization, urbanization, education, the "Green Revolution", population growth, class structure, political structure, etc., to development. The role of the West in the development process of the Third World countries, historically and at present. Special attention given to structural change and international dependency. (*Prerequisite: SO 202 or AN 202 or permission of the Instructor*)
- SO 321 Religion and Society in Asia (3 crs.)**
The interrelationship between religion and social change will be discussed with particular reference to selected countries in Asia, including Japan, India, and Ceylon. The major characteristics of Islam, Hinduism, and Buddhism will be studied in relation to their effect on society.
- SO 325 Sociology of Small Groups (3 crs.)**
Descriptions and explanations of small groups' structures and processes. Analysis of social networks, decision-making processes, power, and influence within small groups. Explanation of behaviors by reference to small group values and norms.
- SO 326 Social Gerontology - Sociology of Aging (3 crs.)**
This course will focus on aging in America as a social problem. Topics covered will include reasons for the view of aging as a problem. The impact of aging on individuals and society, sociological theories of aging, and proposed ways of alleviating or eliminating aging as a problem. (*Prerequisite: SO 202*)
- SO 327 Deviance and Social Control (3 crs.)**
This course examines deviant acts with an eye toward understanding social order and change. Topics covered include the types and causes of deviance, the social conditions and elements of deviant acts, and the effects of deviance and mechanisms for prevention, punishing, and rehabilitating deviant individuals and groups. (*Prerequisite: SO 202, or permission of the Instructor*)
- SO 328 Criminology (3 crs.)**
This course will be concerned with theories of crime causation, and perspectives on administration, treatment, prevention, and prediction. Consideration will be given to the influence of social class and other factors in criminal behavior. (*Prerequisite: SO 202, or permission of the Instructor*)
- SO 329 Public Opinion and Mass Media (3 crs.)**
Principles of mass communication and public opinion will be discussed from the point of view of the source of a message, the message itself, the audience, the channel through which the message proceeds and the effect of the message. (*Prerequisite: SO 202, or permission of the Instructor*)
- SO 330 Woman's Roles: Sociology of Sex Gender (3 crs.)**
An analytical study of the relation of sex to power and influence in society. Differentiation in sex roles as affected by the economy and reinforced by other institutions. New alternatives for women.
- SO 332 Sociology of Organization (3 crs.)**
This course will deal with the emergence, structure, function, and social significance of complex organizations. Emphasis will be placed upon the results of research in hospitals, schools, prisons, and military and industrial organizations. Some attention will be given to informal associations and organizational change. Reciprocal role changes for men. (*Prerequisite: SO 202, or permission of the Instructor*)
- SO 334 White Collar Crime (3 crs.)**
Broadening the definition of crime, this course will study the behavioral systems involved in the commission of white collar crimes in complex structures, such as government bureaucracies, multi-national corporations, and underground systems. The modern institutional factors--political and social--permitting or restricting the commission of such crimes will be investigated. Specifically, the performance of the criminal justice system will be examined. (*Prerequisite: SO 202*)

Sociology & Anthropology

- SO 335 Social Change (3 crs.)**
Sources, patterns, spheres, levels, processes, policies of social change. Classical, neo-classical, modern theories in the field. The course emphasizes the above as related to contemporary societies. (*Prerequisite: SO 202, or permission of the Instructor*)
- SO 340 Sociology of Politics (3 crs.)**
A study of the state, political practices, power, and theories in the field. The emphasis is on the sociological conditions under which the above phenomena evolve. (*Prerequisite: SO 202, or consent of the Instructor*)
- SO 350 Sociology of Work (3 crs.)**
An analysis of the occupational system as affected by the "non-economic" institutional factors. Changes in the occupational structure and the class structure; employers and trade unions; managers and workers; work situation and the life situation; professionalization and "white collar unionism".
- SO 354 Sociology of Corrections (3 crs.)**
Analysis of the social structures and processes involved in dealing with individuals who have been designated as offenders of criminal law. Probation, prison, parole, programs of prevention and rehabilitation. (*Prerequisite: SO 328*)
- SO 355 Juvenile Delinquency (3 crs.)**
Analysis of the nature and types of juvenile behavior that violates law; the mechanisms of defining such behavior as delinquent; and the relationship between delinquency and the social situations of juvenile offenders. (*Prerequisite: SO 202*)
- SO 384 Criminal and Delinquent Behavioral Systems (3 crs.)**
A study of behavioral systems in the commission of crime and delinquency. Such systems include institutional as well as more informal social structures and patterns of behaviors, including the normative rationalizations that support and legitimize criminal and delinquent behaviors in society. (*Prerequisite: SO 328*)
- SO 399 Special Topics in Sociology (3 crs.)**
Various special topics of current interest in sociology will be offered from time to time. Topics will be announced before registration. May be taken more than once but only three (3) credits will be counted toward the first 30 hours in the sociology major. (*Prerequisite: SO 202*)
- SO 400 Seminar: Social Theory (3 crs.)**
The history of social theory and selected topics in modern social theories, analysis of alternative conceptual approaches and their methodological requirements. For majors in sociology or behavioral sciences. (*Prerequisite: SO 202 or permission of the Instructor*)
- SO 401 Contemporary Sociological Theory (3 crs.)**
An examination of post Weberian sociological theories, including treatment of significant theoretical issues currently encountered in the discipline. (*Prerequisite: SO 400, or permission of the Instructor*)
- SO 402 Seminar: Research Methods in Sociology (3 crs.)**
Application of scientific methods to the analysis of social phenomena, methodological orientation in sociology, types of research procedures, nature of sociological variables. For majors in sociology or behavioral sciences. (*Prerequisite: SO 202 or permission of the Instructor*)
- SO 497 Research* (3 crs.)**
Primarily for Senior Sociology Majors; others by special arrangement. Students will conduct social research, using techniques taught in SO 402, writing reports of findings as for publication. Experimental survey and content analysis approaches will be used. (*Prerequisite: SO 402*)
- SO 498 Field Experience in Sociology* (3-15 crs.)**
The field experience provides an academic experience in which the student contributes to the ongoing organizational process while learning to apply sociological theories to observations of structure, function and process in a particular institution. (*Prerequisite: Consent of the Department*)

*No more than six hours of any combination of SO 497, SO 498 or SO 499 may be counted toward the first 30 hours of the sociology requirements for a major.

Sociology & Anthropology

- SO 499 Directed Study in Sociology* (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- SO 501 Graduate Seminar in Sociological Theory (3 crs.)**
Designed to foster skills in theory construction and in analyzing several major sociological paradigms and schools of thought, including structural-functionalism, conflict theory, and symbolic interaction. Readings from classical and modern sociologists such as Durkheim, Marx, Spencer, Parsons, and Homans will be examined. (*Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the Instructor*)
- SO 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- SO 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- SO 504 Graduate Seminar in Sociological Research Methodology (3 crs.)**
Detailed discussion and use of techniques for the empirical study of social order including exploratory, descriptive, and causal research; observation (structured and unstructured), interviews and questionnaires; survey research and experimental design, content analysis, sampling, problems in measurement techniques and data analysis. (*Prerequisite: A minimum of three courses acceptable to the department or consent of the Instructor*)
- SO 506 Theories of Race and Ethnic Relations (3 crs.)**
Focus on the use of racial and ethnic characteristics in the operation of inequality in society. Beginning with the general principles of intergroup relations (majority and minority concepts), material will be introduced to apply these ideas to specific experiences of racial and ethnic groups, especially Black Americans. (*Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the Instructor*)
- SO 508 Social Stratification in Comparative Perspectives (3 crs.)**
Theories of inequality between groups in historical perspective, from classical to modern industrial times. Discussion and evaluation of sociological research in social stratification in regard to different social and cultural groups. (*Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the Instructor*)
- SO 510 Urban Community Analysis (3 crs.)**
The changing structure and dynamics of urban social organization in the context of modernization and urbanization. Emphasis upon cities and metropolitan areas in America. (*Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the Instructor*)
- SO 514 Theories of Social Deviance (3 crs.)**
Descriptions and explanations of a variety of deviant behavior, beliefs, and attributes, including mental and physical deviance, deviant sexual practices, and religious cult movements. Reading, writing, and observation will be conducted in order to understand the social forces that contribute to the creation, maintenance, and change of deviant relationships involved in vice, sin, disloyalty, and crime. (*Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the Instructor*)
- SO 516 Sociology of Sex and Gender (3 crs.)**
Ramifications of ascribed statuses "male" and "female" in contemporary and noncontemporary societies. Origins and effects of gender roles. Examination of myths explaining gender roles. Projections for the future. (*Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the Instructor*)

**No more than six hours of any combination of SO 497, SO 498 or SO 499 may be counted toward the first 30 hours of the sociology requirements for a major.*

Sociology & Anthropology

- SO 518 Sociology of Aging (3 crs.)**
Sociological forces in the aging process and among the aged. Examination of the impact of physiological and psychological forces on the process. The major social institutions and their interactions with aging. Policy implications for the future. *(Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the Instructor)*
- SO 520 Sociological Analysis of Small Groups (3 crs.)**
Description and analysis of the formation, structure, and nature of relationships observed in small and informal groups, including work groups, families, peer groups, cliques, religious sects, communes, and aristocracies. *(Prerequisite: Consent of the Instructor)*
- SO 528 Seminar: Sociology of Education (3 crs.)**
Sociological theories and research relevant to issues in education. Investigation of selected problems from a sociological perspective: socialization, selection and social stratification patterns; bureaucracy, professionalization, and authority relations in schools; prospect of social change resulting from school reform. *(Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the Instructor)*
- SO 530 Seminar in Society, Culture, and Personality (3 crs.)**
Analysis of a variety of structures and processes that influence individuals and that relate them to their social milieu and cultural products. Attention will also be paid to the manner in which individuals both interact with and change social structures and cultural environments, such as technology, institutions, and ideologies. *(Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the Instructor)*
- SO 580 Special Topics in Social Research Techniques (3 crs.)**
Designed to take advantage of the 1) availability of faculty with special expertise in certain issues and techniques of sociological research; 2) specific methodological interests and needs expressed by students; and 3) significant developments in the field of sociology and in society. One or more from a number of methods or methodological issues may be studied, including, but not restricted to the following: survey research, measurement, research design, data analysis, evaluation research, needs assessment, and ethnomethodology. *(Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the Instructor)*
- SO 585 Special Topics in Sociological Theory (3 crs.)**
Designed to take advantage of the 1) availability of faculty with special expertise in certain issues and approaches in sociological theory; 2) specific theoretical interests and needs expressed by students, and 3) significant developments in the field of sociology and in society. One or more from a number of theoretical issues may be examined consistent with the foregoing. *(Prerequisite: A minimum of three sociology courses acceptable to the department or consent of the Instructor)*

Division of Humanities and Creative Arts

Art,
English,
Foreign Languages,
Music,
Philosophy and Religious Studies,
Speech Communication,
Theatre Arts, and
Communication Disorders

UNDERGRADUATE PROGRAMS

The Division of Humanities and Creative Arts consisting of the Departments of Art, English, Foreign Languages, Music, Philosophy and Religious Studies, and Speech Communication, Theatre Arts, and Communication Disorders provides instruction and training in several areas of creative and humanistic endeavors. Through its faculties the Division offers undergraduate majors in Art, Communication Arts and Sciences, English, French, Philosophy, and Spanish. Minors in the areas listed above as well as German, Italian, Music, Portuguese, Russian, and Religious Studies are offered to the undergraduate. Each of the departments in the Division offers a balanced program for the student with ample opportunity to study theory in the classroom and to put that knowledge into practice through internships and other practical experiences.

GRADUATE PROGRAMS

In addition to the Bachelor of Arts degree, the Division of Humanities and Creative Arts offers programs leading to the degree of Master of Arts (in the areas of English, Humanities, and Speech Communication) and the degree of Master of Arts in Teaching (in the areas of Creative Arts, Speech Communication and Theatre Arts, English, Foreign Languages, and Humanities), as well as a Certificate of Advanced Graduate Study (CAGS) in Creative Arts. Further information about these programs may be found below, in the case of interdisciplinary programs, and in the departmental presentations which follow, as well as in the Graduate School section of this catalogue.

MASTER OF ARTS IN HUMANITIES

The Division offers an interdisciplinary program leading to the degree of Master of Arts in Humanities, which is designed to prepare qualified students for research, further graduate study, and teaching. An undergraduate major in one of the disciplines within the scope of the humanities is normally required for admission to this program. An interview is required; students should contact the Graduate School Office for further information. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue.

Humanities & Creative Arts

MASTER OF ARTS IN TEACHING (CONCENTRATIONS IN HUMANITIES AND CREATIVE ARTS)

The Division offers interdisciplinary programs leading to the degree of Master of Arts in Teaching with concentrations in Humanities and Creative Arts. These programs are designed primarily to meet the varied needs of graduate students who are currently teaching at the secondary level. Applicants to the Creative Arts concentration should specify their primary area of interest.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult M.A.T. degree requirements in the Graduate School section of this catalogue), and a minimum of 18 appropriate graduate credits in the area of concentration (approved by the program advisor on the basis of the background, interests, and needs of the student).

CERTIFICATE OF ADVANCED GRADUATE STUDY (CAGS) IN CREATIVE ARTS

The Division offers a program leading to a Certificate of Advanced Graduate Study (CAGS) in Creative Arts. This program is designed to meet the varied career needs of professionals who have earned an appropriate master's degree and who wish to attain greater competence in a combination of areas of study in the field of creative arts. Areas of study offered include art, music, speech communication and theatre arts. Ordinarily, the applicant's master's degree must be in an area within the field of creative arts. Applicants must demonstrate that they possess background relevant to their field, and must indicate that their needs and goals are in accord with the objectives of the CAGS.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of the catalogue. Each student's CAGS program must include the Division's CAGS Seminar in Creative Arts (CA 599), which is designed to provide a broad conceptualization of the field, as well as to focus the student's course of study on critical issues facing professionals in the field today. Remaining credit requirements will be fulfilled by courses which clearly meet the student's academic and career needs selected under the direction of the advisor.

Additional information regarding this program including application procedures and general academic requirements, may be found in the Graduate School section of this catalogue.

- HU 311** **Dante and Medieval Culture in Translation (3 crs.)**
Life and culture of the Middle Ages approached through a close investigation of Dante's *Divine Comedy*.
- HU 330** **English as a Second Language (3 crs.)**
Theoretical, historical and practical considerations of the teaching of English as a second language.
- HU 502** **Research (credit to be arranged)**
Original research undertaken by the graduate student in an area within the Humanities. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- HU 503** **Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in the Humanities. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- HU 599** **CAGS Seminar in the Creative Arts (3 crs.)**
Designed to provide a broad conceptualization of the creative arts, focusing on critical issues facing professionals in the field.

Department of Art

Chairperson: Professor Stephen Smalley
Professors: Joan Hausrath, John Heller
Associate Professors: John Droege
Assistant Professors: Roger Dunn, William Kendall,
Larry Pollans, Dorothy Pulsifer

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS

The Department of Art offers students a choice of two major areas of study and career preparation in the visual arts. For both areas, care has been taken in developing the study of art so that a basic yet versatile and resourceful foundation in the arts is assured.

The major in art is designed to meet the needs of those students whose career ambitions include training for commercial art fields, graphic design, community art programs or graduate study in the arts, as well as those who seek teaching in the public schools as a career.

Students interested in teaching must select High School Education as a minor. Prospective teachers of art are encouraged to join the Student Chapter of the National Art Education Association.

Art majors not interested in an education minor are urged to select a minor complementing their major.

The diversity of course offerings within the Art Department provides an excellent opportunity for students electing an art minor to enlarge upon their cultural foundation. Through a cultivation of aesthetic sensibilities, it is hoped that the entire college experience will be enriched.

To help insure an appropriate selection of art courses in the major or minor, it is important that each student work closely with his or her art advisor or the department chairperson in program selection. This is particularly important within an instructional program that seeks to develop and refine art skills as well as enlarging upon one's creative dimensions.

Students should be aware that typically there will be expenses in studio courses for materials beyond the required educational services fees.

A comprehensive gallery calendar is maintained throughout the academic year in the Wallace L. Anderson Gallery as well as a continuing exhibition of the permanent art collection of the College. Each gallery facility features a diversity of art that facilitates and expands classroom instruction.

ART MAJOR

AR 120, AR 121, AR 201, AR 202, AR 220, AR 230, AR 240, AR 250, AR 320, plus one course from the following: AR 302, AR 303, AR 304, AR 305, AR 306, AR 307, AR 313; one crafts course (3 crs.) from, but not limited to, the following: AR 271, AR 273, AR 280, AR 290, AR 291; and one additional 3 credit art elective.

ART MINOR

AR 120, AR 220, the remaining twelve credits are selected in conjunction with an art advisor.

Art

ART EDUCATION

The requirements for teacher certification in Massachusetts have changed. This in turn is necessitating corresponding changes in requirements for programs which include certification. Students should consult with the department chairperson concerning changes in program requirements. Programs leading to initial certification will include a full semester of student teaching. Graduate programs leading to an additional certificate will require the equivalent of a half-semester practicum.

Students minoring in education must refer to the Department of High School, Middle School and Adult Education for specific requirements.

ART HISTORY MINOR

Not open to art majors.

AR 201, AR 202 (required); select 5 courses from AR 302, AR 303, AR 305, AR 306, AR 307, AR 308, AR 311, AR 313, AR 314.

PROGRAM IN SCIENTIFIC AND TECHNICAL ILLUSTRATION

For details, see *Undergraduate Multidisciplinary and Pre-Professional Programs*.

GRADUATE PROGRAMS

The Department of Art offers courses at the graduate level which may be taken in the Division's Master of Arts in Teaching and CAGS programs in Creative Arts. A diverse and appropriate program of study in art is ensured when the student works closely with the advisor in course selection. It should be noted that students applying to the MAT in Creative Arts program who plan to concentrate in the area of art must have a minimum background of 18 credits in art prior to acceptance.

More detailed information regarding this program may be found under the Division of Humanities and Creative Arts, as well as in the Graduate School section of this catalogue.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: AR 110, AR 111, and AR 499.



COURSE OFFERINGS*

- AR 110 Introduction to Art (3 crs.)**
Emphasis on painting, sculpture, and architecture; analysis of media, technical processes, and aesthetic principles; and discussion of style and its historical context. Assigned readings and museum visits. *May not be used to fulfill art major requirements.*
- AR 111 Introduction to Architecture (3 crs.)**
A course for the non-art major. A study of domestic, religious, commercial, and government buildings throughout history. Attention given to elements of style and systems of architectural construction. *May not be used to fulfill art major requirements.*
- AR 112 Introduction to Studio Art (3 crs.)**
Art appreciation approached through slide lectures and studio exercises. Concepts of visual design, style, and expression explored through various two and three-dimensional media: paint, ink, clay, wood, etc.
- AR 120 Basic Design (3 crs.)**
Studio exercises dealing with the fundamental elements and principles of design including color, shape, line, texture, balance and space and the organization of these elements in a work of art. Six hours per week.
- AR 121 Three-Dimensional Design (3 crs.)**
Studio projects concerned with the three-dimensional aspects of mass and form including media, surfaces, and dynamics of forms in space.
- AR 201 History of Art I (3 crs.)**
Major developments in art from the prehistoric through the late Gothic. Style is examined in relation to the historical process. Assigned readings and museum work.
- AR 202 History of Art II (3 crs.)**
Major developments in art from the Renaissance through the Modern era. The historical approach supplemented with analysis of stylistic problems. Assigned readings and museum work.
- AR 220 Drawing I (3 crs.)**
Basic concepts, perspective, modeling in light and dark, contour drawing. Exploration of various media: pencil, pen and ink, charcoal, ink wash, etc. Six hours per week.
- AR 230 Painting I (3 crs.)**
Basic skills, picture organization, and painting techniques applied to assigned problems. Field trips to museums and galleries. Six hours per week. (*Prerequisite: AR 120 and AR 220 or consent of the Instructor*)
- AR 235 Watercolor Painting (3 crs.)**
Development of transparent watercolor techniques and pictorial composition. Six hours per week.
- AR 240 Sculpture I (3 crs.)**
Design experimentation with traditional and new problems in a wide range of media. Six hours per week.
- AR 250 Printmaking I (3 crs.)**
The basic methods, materials and processes used in printmaking. Six hours per week. (*Prerequisite: AR 120 and AR 220 or consent of the Instructor*)
- AR 260 Introduction to Commercial Art (3 crs.)**
Art as it is used in advertising and commercial design including illustration; layout; typography; space, package, and object design. Includes field trips and guest speakers. (*Prerequisite: Art major or consent of the Instructor*)

*See page 68 for general information regarding course offerings

Art

- AR 270 Ceramics (3 crs.)**
Introduction to materials and techniques including handbuilding, wheel work, decorating, and firing.
- AR 273 Introduction to Glass (3 crs.)**
An exploration of the technical, traditional and contemporary, and aesthetic possibilities of glass: copper foil, lead came work, fusing, slumping and enamels. (*Prerequisite: AR 120 or consent of the Instructor*)
- AR 280 Metals I (3 crs.)**
Basic design, construction, and forming techniques. Jewelry, constructed forms, sculpture. Six hours per week.
- AR 290 Weaving I (3 crs.)**
Introduction to traditional and contemporary weaving and related techniques. Assigned projects stress the aesthetic combined with the technical considerations of fiberwork. Six hours per week.
- AR 291 Tapestry Weaving (3 crs.)**
Traditional and contemporary tapestry techniques combined with the aesthetics of design in fiber. Six hours per week.
- AR 300 Methods and Materials in Art: Preschool, K-6 (3 crs.)**
Studio experiences with materials and processes related to the teaching of art in the public schools. Discussion of methodology and child art. Assigned readings and field trips to school art programs. Six hours per week.
- AR 302 Greek and Roman Art (3 crs.)**
Painting, sculpture, architecture and the minor arts. Historical antecedents and significant cultural influences in art.
- AR 303 Medieval Art and Architecture (3 crs.)**
A study of painting, architecture, sculpture and minor arts produced in Europe from the time of early Christianity to the Renaissance. Special emphasis on stylistic and cultural influences.
- AR 304 Renaissance Art and Architecture (3 crs.)**
The development of the arts of architecture, painting, and sculpture in the Early and High Renaissance, with special emphasis on their interrelationships and their relation to the artistic theories and cultural ideals of the time.
- AR 305 Baroque Art (3 crs.)**
Mannerist and Baroque styles of the sixteenth through eighteenth centuries will be studied, with emphasis on their origins in Italy and development through Western Europe.
- AR 306 19th Century Art and Architecture (3 crs.)**
A study of European Art and architecture from Neo-Classicism to Post-Impressionism. Attention given to the historical and cultural settings in which the art was produced.
- AR 307 20th Century Art and Architecture (3 crs.)**
A study of major movements in art and architecture of the 20th century. Attention given to the theoretical foundations for these modern artistic movements as well as their stylistic distinctions.
- AR 308 American Art and Architecture (3 crs.)**
Major trends in painting, sculpture, and architecture in America, 1620 to present, including regional styles, folk art, and crafts.
- AR 310 Art and the Crafts in Special Education (3 crs.)**
Art education theory and direct experience with a variety of materials and processes adapted to the needs of special education. Six hours per week.
- AR 311 Primitive Art (3 crs.)**
Formal art properties and aesthetic qualities of primitive art; the physical, psychological, and sociological backgrounds which brought this art into being.

Art

- AR 312 Interior Design (3 crs.)**
Form and function of contemporary domestic and commercial spaces. Studio and field experiences related to problem analysis, construction techniques and materials. Six hours per week.
- AR 313 Art and Architecture of Early New England (3 crs.)**
A study of domestic architecture and decorative arts of New England from its Pilgrim beginnings to the early 19th century. The course consists of a series of classroom slide lectures and field trips to historic houses throughout New England.
- AR 314 Art History Study Tour (6 crs.)**
Selected topics in the history of art studied in museums and edifices of Europe. Preparatory classwork conducted on campus prior to travel. May be taken twice (12 s.h.) for workshops with different itineraries and course topics.
- AR 315 Drawing/Painting: Coastal Maine Workshop (3 crs.)**
A two-week in-residence workshop in coastal Maine where shore lines, ocean, woods, and local villages interact to provide an aesthetic unique to the region. Drawing and/or painting activities will have a particular relationship to the natural surroundings. May be taken twice for a total of 6 credits.
- AR 320 Drawing II (3 crs.)**
Advanced study of drawing style and technique with emphasis on the human figure. (*Prerequisite: AR 220 or consent of the Instructor*)
- AR 330 Painting II (3 crs.)**
Advanced projects will be planned according to the individual's stylistic development. Six hours per week. (*Prerequisite: AR 230 or consent of the Instructor*)
- AR 340 Sculpture II (3 crs.)**
Advanced projects in design and media. Six hours per week. (*Prerequisite: AR 240 or consent of the Instructor*)
- AR 350 Printmaking II (3 crs.)**
Advanced projects planned according to the student's stylistic development and media preference. Six hours per week. (*Prerequisite: AR 250 or consent of the Instructor*)
- AR 351 Silkscreen (3 crs.)**
An introduction to traditional and innovative serigraph methods: glue, tusche, paper, cut film and photographic silk screen stencil. Six hours per week. (*Prerequisite: AR 220 or consent of the Instructor*)
- AR 352 Lithography (3 crs.)**
An exploration of the technical and aesthetic possibilities of lithography in black and white and color. Stone lithography, metal plates and paper plates will be utilized. Six hours per week. (*Prerequisite: AR 220 or consent of the Instructor*)
- AR 360 The Artist and the Marketplace (3 crs.)**
The business and professional side of art, and the pursuit and management of a career in art. A study of galleries, museums, and commercial art fields, dealing with aspects of exhibiting and selling work, and the development of relevant business skills. Includes field trips and guest speakers.
- AR 370 Ceramics II: Advanced Projects & Techniques (3 crs.)**
Advanced problems and techniques. (*Prerequisite: AR 270*)
- AR 371 Wheel Throwing (3 crs.)**
Advanced problems and experience on the potter's wheel, and aesthetics of ceramic design. Six hours per week. (*Prerequisite: AR 270 or consent of the Instructor*)
- AR 372 Clay and Glazes (3 crs.)**
Advanced work in the chemistry and compounding of clay and glaze materials. Six hours per week. (*Prerequisite: AR 270 or consent of the Instructor*)

Art

- AR 380 Metal Design II (3 crs.)**
Advanced problems and techniques. Six hours per week. (*Prerequisite: AR 280 or consent of the Instructor*)
- AR 381 Advanced Jewelry Design (3 crs.)**
Specialized techniques for the design and creation of jewelry in precious metals, and experimental construction techniques with these metals. Six hours per week. (*Prerequisite: AR 280 or consent of the Instructor*)
- AR 390 Weaving II (3 crs.)**
Advanced problems and techniques. Six hours per week. (*Prerequisite: AR 290 or consent of the Instructor*)
- AR 420 Advanced Drawing (3 crs.)**
Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. Course may be repeated three times. Six hours per week. (*Prerequisite: AR 220, 320, and consent of the Instructor*)
- AR 430 Advanced Painting (3 crs.)**
Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. Course may be repeated three times. Six hours per week. (*Prerequisite: AR 230, 330, and consent of the Instructor*)
- AR 440 Advanced Sculpture (3 crs.)**
Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. Course may be repeated three times. Six hours per week. (*Prerequisite: AR 240, 340, and consent of the Instructor*)
- AR 450 Advanced Printmaking (3 crs.)**
Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. Course may be repeated three times. Six hours per week. (*Prerequisite: AR 250, 350, and consent of the Instructor*)
- AR 470 Advanced Ceramics (3 crs.)**
Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. Course may be repeated three times. Six hours per week. (*Prerequisite: AR 271, 272, and consent of the Instructor*)
- AR 480 Advanced Metals (3 crs.)**
Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. Course may be repeated three times. Six hours per week. (*Prerequisite: AR 280, 380, and consent of the Instructor*)
- AR 490 Advanced Weaving (3 crs.)**
Advanced projects will be undertaken in chosen media under direct supervision of a faculty member. Course may be repeated three times. Six hours per week. (*Prerequisite: AR 290, 390, and consent of the Instructor*)
- AR 491 Art Education Seminar (3 crs.)**
Limited to seniors who are student teaching in Art. Examination of various concepts in art education as well as historical and professional perspectives. Field trips, speakers, and workshops. (*Prerequisite: ED 490 or consent of the Instructor*)
- AR 492 Topics in Art (3 crs.)**
Topics of limited or special interest in Art Education, Art History or Studio Art. Specific topics to be announced prior to registration. Course may be repeated for different topics. (*Prerequisite: Consent of the Instructor*)
- AR 498 Internship in Art (3-15 crs.)**
A non-classroom experience designed for a limited number of junior and senior majors to complement their academic preparation. (*Prerequisite: Consent of Department Chairperson; formal application is required*)
- AR 499 Directed Study in Art (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- AR 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

- AR 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- AR 530 Advanced Painting (3 crs.)**
Within the context of the classroom environment, students will move toward individual imagery development including exploration of new media and techniques as appropriate and supported by regular critiques by the instructor. (*Prerequisite: 6 credits in painting or consent of the Instructor*)
- AR 540 Advanced Sculpture (3 crs.)**
This is a sculpture course designed to challenge the student's grasp of the function of form and its expressive potential through the study of pure form and forms in nature. The materials used are clay, plaster, wood and metal. (*Prerequisite: 6 credits in sculpture or consent of the Instructor*)
- AR 550 Advanced Printmaking (3 crs.)**
Printmaking for those with previous experience. Course objectives and requirements will be planned on the basis of the individual student's interests and background. (*Prerequisite: 6 credits in printmaking or consent of the Instructor*)
- AR 570 Advanced Ceramics (3 crs.)**
Work in wheel-throwing, handbuilding, sculptural ceramics, clay technology, glaze chemistry, or studio management in an individualized program depending upon the student's previous course work, abilities, and interests. (*Prerequisite: 6 credits in ceramics or consent of the Instructor*)
- AR 580 Advanced Metals (3 crs.)**
Work in surface embellishment, construction, casting, and forming of non-ferrous metals. Emphasis on experimentation with new technology, materials, and techniques. (*Prerequisite: 6 credits in metal or consent of the Instructor*)
- AR 590 Advanced Weaving (3 crs.)**
Advanced work in fiber planned in accordance with the student's prior course work and experience. Emphasis given to thorough exploration of color, design, and fiber selection in the execution of technically ambitious projects. Areas of study may include rug weaving, eight-harness double weaves, sculptural weaving and tapestry.



Department of English

Chairperson: Professor Clifford Wood
Professors: Marcia Anderson, Thomas Curley, Joseph DeRocco,
Charles Fanning, Donald Johnson, Charles McGinnis,
Harold Ridlon, Delija Valiukenas, Joseph Yokelson
Associate Professors: Charles Angell, Harold DeLisle,
Grant Keener, Joseph Liggera, James Nerney,
Charles Nickerson, Lois Poule, Paula Vadeboncoeur
Assistant Professors: Barbara Apstein, Barry Batorsky,
Michael Boyd, Maureen Connelly, Judith Stanton
Instructor: Evelyn Dedick

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS

The program of study for English majors aims to give students an acquaintance with the history and background of English and American literature, an understanding of great literary works, and the ability to analyze, interpret, and appreciate what they read. With a broad foundation in English and American literature and a firm grasp of literary principles and techniques of critical analysis, an English major should be ready to pursue, in addition to the usual options of teaching and graduate study, a wide variety of fields including banking, law, medicine, publishing, government service, public relations, technical writing, creative writing, advertising, and business administration.

For students who wish to engage in intensive study of the literature and culture of a particular period while still fulfilling the normal course requirements for the English major, the Department offers study options in Medieval, Seventeenth Century, and Nineteenth Century language and literature. The Department also offers an Honors Program for students who wish to pursue independent study culminating in a thesis.

The English Department participates in the multidisciplinary minors in American Studies, Canadian Studies, and linguistics. For specific information on these programs, consult the catalogue section *Undergraduate Multidisciplinary and Pre-Professional Programs*.

ENGLISH MAJOR

Majors must achieve a grade of C or above in EN 101, EN 102.

The major must earn 36 credits in English which must include three semester hours in each of the following:

- English literature before 1800;
- English literature after 1800;
- American literature;
- a seminar.

No more than six hours of 200 level literature courses can be credited toward the major.

Students majoring in English may meet the departmental foreign language requirement by satisfying intermediate level proficiency in any foreign language approved by the department.

ENGLISH MINOR

Traditionally considered the province of Liberal Arts majors, the English Minor also offers a suitable adjunct for students majoring in such specialized technical and professional fields as Computer Science, Social Sciences, Behavioral Sciences, and Management Science. Eighteen credits in English are required with at least nine in courses at or above the 300 level.

English

HIGH SCHOOL MINOR

The requirements for teacher certification in Massachusetts have changed. Students should consult with the department chairperson concerning changes in program requirements. Programs leading to initial certification will include a full semester of student teaching. Graduate programs leading to an additional certificate will require the equivalent of a half-semester practicum. Specific course requirements for teachers of English, grades 9-12, are listed under the Department of High School, Middle School and Adult Education.

GRADUATE PROGRAMS

MASTER OF ARTS

The Department of English offers a program leading to the degree of Master of Arts in English. An undergraduate major in English, with at least twenty-four hours of above average work in the discipline, is normally required for admission to this program. Students with deficient academic backgrounds are sometimes accepted into the program with the stipulation that these deficiencies be made up before work actually credited to the degree begins.

Upon acceptance into the program, the student will be assigned an advisor and given copies of the brochures entitled "Graduate Study in English" and "Recommended Readings for M.A. and M.A.T. Candidates." All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. In addition to meeting general degree requirements, the student must complete courses his advisor deems appropriate to his degree program, including at least one graduate seminar and EN 500 Theory and Discipline of English.

The department offerings listed below include the following courses which may not be taken for graduate credit: all courses in the 100 and 200 levels and EN 499.

MASTER OF ARTS IN TEACHING

The Department of English offers a program leading to the degree of Master of Arts in Teaching with a concentration in English, which is designed primarily to meet the varied needs of graduate students who are currently teaching at the secondary school level. Upon acceptance in the program, the student will be assigned an advisor and given copies of the brochures entitled "Graduate Study in English" and "Recommended Readings for M.A. and M.A.T. Candidates." All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult M.A.T. degree requirements in the Graduate School section of this catalogue); and a minimum of 21 appropriate graduate credits in English, approved by the program advisor on the basis of the background, interests, and needs of the student (including EN 301 Writing and the Teaching of Writing).

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all courses in the 100 and 200 levels and EN 499.

English

COURSE OFFERINGS*

Successful completion of EN 101, EN 102 (or their equivalent) is a prerequisite to all other English courses.

- EN 100 Basic Communication Skills I (0 crs.)**
This course will consist of an intensive review of basic communication skills, chiefly those of reading and writing.
- EN 101 English Composition I (3 crs.)**
EN 101 will concentrate on the writing of effective expository prose. The student will be expected to master such skills as the development and support of thesis statements, paragraph construction, and composition of the short essay.
- EN 102 English Composition II (3 crs.)**
EN 102 will focus on the writing of extended essays. Special attention will be given to persuasive writing and to research and documentation.
- EN 200 Advanced Composition (3 crs.)**
Expository writing is taught through frequent practice, analysis of models, and criticism by instructor and students. Opportunity is available for the student to develop his writing in any specific area he chooses, but emphasis will be on satire, argument, critical analysis, exposition, and description. Some attention will be given to the major developments in English prose style since 1600. Does not satisfy literature G.E.R.
- EN 201 Technical Writing (3 crs.)**
This course, geared closely to work being done by individual students in other disciplines, will help them develop techniques of composition essential to sophisticated written communication in those fields. Cooperation with faculty members in the natural sciences, behavioral sciences, and social sciences will be used to achieve clear, professional, written expression. Does not satisfy literature G.E.R.
- EN 211, 212 Literary Classics of Western Civilization I-II (3 crs. for each semester)**
Through classic examples of epic, myth, sacred history, parable, allegory, tragic and comic drama, philosophical dialogue, satire, lyric, and novel, the student will be introduced to the principal literary forms through which great writers, from ancient times to the twentieth century, have contributed to the religious, intellectual, moral, and esthetic traditions of Western culture.
- EN 214 Classical Literature in Translation (3 crs.)**
The course will study the important Greek and Roman writers including, among others, Homer, Sophocles, Plato, Euripides, Cicero, Horace, and Virgil. The focus will be on rediscovering the grandeur and glory of classical civilizations.
- EN 221, 222 Major English Writers I-II (3 crs. for each semester)**
Representative works by the major English writers will be studied both formally and historically to develop an understanding of the genres, style, and themes, which characterize English imaginative and critical writing. The first semester will examine works from the Anglo-Saxon period to the eighteenth century; the second, works of the nineteenth and twentieth centuries.
- EN 225 The Theme of Love (3 crs.)**
Various literary treatments of the theme of love will be approached through such works as the following: Chaucer, *Troilus and Criseyde*; Donne, Poetry; Shakespeare, *Romeo and Juliet*, *Anthony and Cleopatra*; Dryden, *All for Love*; Byron, *Don Juan*, *Cantos I-IV*; Bronte, *Wuthering Heights*; Browning Poems; Henry James, *The American or The Portrait of a Lady*; Lawrence, *Sons and Lovers*; Hemingway, *A Farewell to Arms*.
- EN 230 Creative Writing (3 crs.)**
Fiction, non-fiction, verse, drama or any experimental forms may be undertaken by the student. Class discussion will center on the examination of both professional and student efforts. Frequent conferences will be held with individual students. Does not satisfy literature G.E.R.

**See page 68 for general information regarding course offerings*

English

- EN 231, 232 Major American Writers I-II (3 crs. for each semester)**
A general survey of American literature from the colonial beginnings to the present. Writers such as Franklin, Edwards, Irving, Poe, Hawthorne, Emerson, Whitman, Dickinson, Twain, James, Frost, Eliot, Faulkner, and Hemingway will be studied in their social and cultural contexts.
- EN 235 The Short Novel (3 crs.)**
Works selected from such writers as James, Mann, Kafka, and Chekov. (*Prerequisite: Consent of the Instructor*)
- EN 238 The Short Story (3 crs.)**
The primary focus will be on the examination of the relationships between form and content in several British, American, and continental short stories. A secondary concern will be the historical development of the genre.
- EN 241, 242 Shakespeare I-II (3 crs. for each semester)**
A general introduction to Shakespeare's plays set against the background of the times, representative selections from the tragedies, comedies, and histories will be studied in detail.
- EN 251 Literary Figures and Problems (3 crs.)**
The course will provide the student with the opportunity to study particular literary figures and problems, viewing them from a broad historical and critical perspective.
- EN 252 Literary Types (3 crs.)**
The course will approach literature by type, meaning 'type' to signify both genre and form. A semester's study might focus on biography and autobiography, the novel, the epic, comedy, tragedy, or satire. The reading will include diverse works representative of a particular type.
- EN 261 Film Study: Introduction to the Art (3 crs.)**
The course will provide the student with a critical evaluation of major American and foreign films and directors from the silent era to the present. The study will be directed toward developing in the student standards of critical awareness and esthetic appreciation. In addition to film viewing, there will be readings in film theory, interpretation, and criticism. Does not satisfy literature G.E.R.
- EN 262 Film Study: Literature and Film (3 crs.)**
The course will focus on the way in which literature is adapted to film. Viewing and reading works in both media will be required. Does not satisfy literature G.E.R.
- EN 280 Journalism (3 crs.)**
Students will be helped to develop skills in copyediting and proofreading with special emphasis given to objective news story writing. Some attention will be given to dramatic criticism and sports writing. The workshop approach will be used. Does not satisfy literature G.E.R.
- EN 283, 284 Major Canadian Writers in English I-II (3 crs. for each semester)**
A survey of major Canadian writings in English from the beginning to the present, placing the works against the background of general Canadian culture.
- EN 301 Writing and the Teaching of Writing (3 crs.)**
Writing, criticism, creativity. Student participation in criticism as a learning device and as a means to a reasonable load for the teacher. Objective is to improve the student's writing skill by the same techniques he can use in teaching the skill. Text by Don Murray. Does not satisfy literature G.E.R.
- EN 305 History of the English Language (3 crs.)**
Origins and development of English. Selected readings in Old and Middle English.
- EN 309 Early American Literature (3 crs.)**
The course will focus on selected readings from Colonial beginnings through James Fenimore Cooper. Offered in alternate years.
- EN 310 Black Literature in the United States (3 crs.)**
Black Literature in all genres from *The Narrative of Frederick Douglass* to the present, including such writers as W.E.B. DuBois, Charles Chesnutt, Langston Hughes, Richard Wright, Ralph Ellison, and Malcolm X.

English

- EN 312 Studies in Modern British Fiction (3 crs.)**
Readings in selected twentieth-century British novelists, such as E.M. Forster, D.H. Lawrence, James Joyce, and Graham Greene. (*Prerequisite: EN 222 or consent of the Instructor*)
- EN 314 Medieval English Literature (3 crs.)**
Selected readings in non-Chaucerian writing: Langland, Gower, romance, lyrics, drama. (*Prerequisite: EN 211, or EN 221, or consent of the Instructor*)
- EN 320 Chaucer (3 crs.)**
Troilus and Criseyde and selected readings from the *Canterbury Tales*. (*Prerequisite: EN 222 or consent of the Instructor*)
- EN 321 The Age of Pope (3 crs.)**
The literature of the neo-classical period, with emphasis on the works of Pope, Swift, Gay, Addison and Steele.
- EN 322 The Age of Johnson (3 crs.)**
The writings of several major figures, such as Johnson, Boswell, Fielding, Richardson and others.
- EN 323 Introduction to Linguistics (3 crs.)**
The generative-transformational theory of syntactic structure as applied to the English language. Selected readings on various aspects of linguistics. Does not satisfy literature G.E.R.
- EN 329 Modern American Fiction (3 crs.)**
The course will focus on short fiction and the novel between the two World Wars.
- EN 330 Recent American Fiction (3 crs.)**
The course will focus on short fiction and the novel since World War II. Such writers as Mailer, Bellow, Updike, Roth, and others will be studied.
- EN 331 U. S. Literature in the Nineteenth Century I (3 crs.)**
Selected readings in Cooper, Hawthorne, Poe, Emerson, Thoreau, Whitman, Dickinson.
- EN 332 U. S. Literature in the Nineteenth Century II (3 crs.)**
The novels and tales of Melville, Twain, Hawthorne, and James. (*Prerequisite: EN 231 or EN 331*)
- EN 333 Realism and Naturalism in American Literature (3 crs.)**
Studies in the fiction of Howells, James, Stephen Crane, Frank Norris, Theodore Dreiser, and in the twentieth-century extensions of realism in the novels of writers such as Sinclair Lewis, Sherwood Anderson, Dos Passos and Farrell. Attention will also be paid to the proselytizing criticism of the first generation of realists, notably James' prefaces and Howells' essays.
- EN 335 Elizabethan and Jacobean Drama (3 crs.)**
Reading and discussion of a number of plays with attention to contemporary social developments as well as to the historical development of the English Play.
- EN 340 Literature of the English Renaissance (3 crs.)**
The non-dramatic literature of the Age of Shakespeare including the reading of works by such writers as Sidney, Spenser, Nashe, Marlowe, and Drayton. Although the emphasis will be on textual analysis, the historical, social, and cultural background of the period will also be considered.
- EN 341 Literature of the Continental Renaissance (3 crs.)**
Selected works of Petrarch, Boccaccio, Machiavelli, Erasmus, Castiglione, Rabelais, Cellini, Montaigne, Cervantes, and Ronsard representing prevailing literary themes and techniques. Lectures and discussions on the art, history, philosophy, and music of the age will be offered by faculty in these disciplines.
- EN 342 Shakespeare: Histories and Comedies (3 crs.)**
This course provides the student of Shakespeare with examples of Shakespeare's art in dominant Renaissance dramatic forms and with some of his recurring thematic concerns. In addition, study of the Histories and Comedies demonstrates Shakespeare's growth in the dramatic use of language. Plays for study will include the *Comedy of Errors*, *Two Gentlemen of Verona*, *Much Ado About Nothing*, *As You Like It*, *Twelfth Night*, *Richard III*, *Richard II*, *Henry IV, Parts I and II*, and *Henry V*.

- EN 343 Shakespeare: Tragedies and Late Plays (3 crs.)**
This course offers the student of Shakespeare studies in the various dimensions of the tragic vision of man. In addition, study of the Late Plays provides the student with examples of dramatic works that proceed beyond the tragic dimension. Selected plays will include *Hamlet*, *King Lear*, *Othello*, *Macbeth*, *Anthony and Cleopatra*, *Measure for Measure*, *The Winter's Tale*, and *The Tempest*.
- EN 346 Southern Literary Renaissance (3 crs.)**
Beginning with the Fugitives in the 1920's (Robert Penn Warren, Allen Tate, John Crowe Ransom, and Donald Davidson primarily) and their concern with the problem of the Southern writer's identity as a Southerner and an artist, the course will focus on the writings of such contemporary figures as William Faulkner, Tennessee Williams, Katherine Anne Porter, Flannery O'Connor, Carson McCullers, Eudora Welty, and Peter Taylor.
- EN 350 Modern English Novel (3 crs.)**
A selective survey of major contributors to the English novel from Joseph Conrad through the school of the "Angry Young Men." Major attention will be given to the analysis of specific texts.
- EN 353 Modern European Drama (3 crs.)**
Main forces in Modern European drama starting with Ibsen.
- EN 356 Modern American Drama (3 crs.)**
Selected plays of dramatists from O'Neill to Albee.
- EN 360, 361 The English Novel I-II (3 crs. for each semester)**
The development of the English novel, including the works of Defoe, Richardson, Fielding, Smollett, Sterne, Austen, and Scott in the first semester, and Dickens, the Brontes, Thackeray, Eliot, Trollope, Conrad, and Hardy in the second semester.
- EN 365 Victorian Prose and Poetry (3 crs.)**
The major emphasis will be placed on the poetry of Tennyson, Browning, and Arnold, but the works of other nineteenth-century poets such as Hopkins and Hardy will also be read and discussed. The essays of Carlyle, Arnold, Newman, Huxley, and others will be read in conjunction with the poetry.
- EN 366 Tennyson, Browning, and Arnold (3 crs.)**
These major nineteenth-century authors will be studied in some detail, with particular reference to the historical, social, and cultural milieu within which they wrote.
- EN 367 English Literature of the Late Victorian and Edwardian Periods (3 crs.)**
The major writers of the late nineteenth and early twentieth centuries will be examined from an esthetic, social, and intellectual point of view with readings from such novelists as Gissing, James, Wilde, Beerbohm, Carroll, Wells, Hardy, Corvo, Forster, and Conrad, and such poets as Rossetti, Swinburne, Morris, Hopkins, and Yeats.
- EN 370 Seventeenth Century Literature (3 crs.)**
The course is an introduction to the prose and poetry of the seventeenth century in England, exclusive of Milton. Such writers as Donne, Jonson, Bacon, Burton, Browne, and Dryden will be examined, and various persistent elements, such as the classical influence, will be explored.
- EN 380 Milton (3 crs.)**
The main works of Milton: *Paradise Lost*, *Paradise Regained*, and *Samson Agonistes*, the minor poetic works, and selected prose.
- EN 381 Irish Literature I (3 crs.)**
A survey of earlier Irish Literature in translation from the Gaelic and in English. Selections from the epic poem, *Tain Bo Cuailnge*, Gaelic lyric poetry (600-1800 A.D.). The pioneering fiction of Maria Edgeworth and William Carleton. The poetry of the nineteenth-century balladeers, Thomas Moore, Thomas Davis, James Clarence Mangan, and Sir Samuel Ferguson. The accomplishments of the Irish literary revival of 1890-1920: fiction by Daniel Corkery, George Moore, Seamus O'Kelly, and James Joyce; poetry and plays by William Butler Yeats; plays by John M. Synge.

English

- EN 382 Irish Literature II (3 crs.)**
A survey of later modern and contemporary Irish Literature. The later fiction of James Joyce and the later poetry of William Butler Yeats. The plays of Sean O'Casey, Brendan Behan, Samuel Beckett, and Brian Friel. The poetry of Austin Clarke, Patrick Kavanagh, Thomas Kinsella, John Montague, Richard Murphy, and Seamus Heaney. The fiction of Liam O'Flaherty, Sean O'Faolain, Frank O'Connor, Flann O'Brien, Mary Lavin, William Trevor, Edna O'Brien, and others.
- EN 386 English Romantic Poets (3 crs.)**
Selected poetry and prose of Wordsworth, Coleridge, Shelley and Keats will be studied with the principal object of understanding the character and modes of expression of each poet's imaginative vision. Consideration will be given to historical background and to developments in philosophy and esthetic theory which have a direct bearing on Romantic poetry.
- EN 391 Modern Literary Criticism (3 crs.)**
Several twentieth-century approaches to literary analysis, interpretation, and evaluation. Particular attention will be given to literary concepts derived from psychoanalysis, sociology, anthropology, semantics, philosophy, and theology. Such topics as existentialist criticism, the "new criticism", and the theory of myth and symbol will be considered.
- EN 393 Modern British Poetry (3 crs.)**
The major British poets of the twentieth century, with particular emphasis on the works of Hopkins, Yeats, Eliot, and Thomas.
- EN 394 Modern American Poetry (3 crs.)**
The major American poets of the twentieth century, with particular emphasis on the works of Robinson, Frost, Crane, Auden, Williams, and Stevens.
- EN 395 Studies in Recent American Poetry (3 crs.)**
Intensive study of some of the major figures in American poetry of the past ten or fifteen years: Theodore Roethke, Robert Lowell, and John Berryman will certainly be included. Also, three or four poets to be selected from the following list: Richard Eberhart, Richard Wilbur, W.D. Snodgrass, W.S. Merwin, Sylvia Plath, James Wright, James Dickey, Randall Jarrell, and Gary Snyder.
- EN 397 Film Study: The Director's Art (3 crs.)**
The course will offer an intensive study of the works of one or more directors who have significantly extended or added to film vocabulary.
- EN 398 Film Study: Genres (3 crs.)**
The course will focus on films that have contributed to the definition of such cinematic genres as the western, the gangster movie, the documentary, the light comedy, and others.
- EN 400 Techniques of Literary Research (3 crs.)**
Research procedures, with special reference to the materials and methods of literary style and publication. Various critical approaches to literature will be examined, and some evaluation of scholarly procedure will be made.
- EN 410 The Writer and his Sources (3 crs.)**
The writer and his sources will offer a practical knowledge of how literary criticism and literary history interrelate. The genesis and composition of literary texts will be considered in light of appropriate background materials. Authors studied will vary. (*Prerequisite: EN 101*)
- EN 420 English Education Seminar (3 crs.)**
Limited in enrollment to seniors contemplating secondary school teaching. The problems of English education in a rapidly changing social, cultural, and intellectual environment. Reports, small group discussions, and meetings with professionals in the field.
- EN 440 Topics in Linguistics (3 crs.)**
Various special topics of current interest in linguistics will be offered from time to time, including language change, metaphor, stylistics, non-human communication, psycholinguistics, psycholinguistics and reading, and sociolinguistics. May be taken more than once. Does not satisfy literature G.E.R.

English

- EN 494 Seminar (3 crs.)**
The seminar will treat selected topics in language and literature.
- EN 495 Seminar in English Literature (3 crs.)**
This seminar, primarily for seniors, honors candidates, and graduate students, will pursue in depth certain themes and authors in English literature.
- EN 496 Seminar in American Literature (3 crs.)**
This seminar, primarily for seniors, honors candidates, and graduate students, will pursue in depth certain themes and authors in American literature.
- EN 497 Seminar in World Literature (3 crs.)**
This seminar, primarily for seniors, honors candidates, and graduate students, will pursue in depth certain themes and authors in world literature, the topic changing from year to year.
- EN 498 Internship in English (3-15 crs.)**
Off-campus work-study experience in areas related to the expanding discipline of English. In-depth exposure to such fields as editing, journalism, media, public relations, technical writing and the like. Effort is made through this program to expand the occupational potential of the English major. Internship credits are not applicable to the 36 credits required for the major. (*Prerequisite: Consent of the Department*)
- EN 499 Directed Study in English (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- EN 500 Theory and Discipline of English (3 crs.)**
This course will examine the backgrounds and techniques of scholarship in the field of literature. Some acquaintance with critical approaches to literature, as well as comprehensive experience in the major genres and periods of English and American literature, will be assumed.
- EN 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- EN 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- EN 529 Donne and the Metaphysical Poets (3 crs.)**
An intensive study of those seventeenth-century poets known as the metaphysicals: Donne, Herbert, Vaughan, Marvell and Crashaw.
- EN 537 Studies in British Romanticism (3 crs.)**
A study of the prose and poetry of the romantic period, focusing on such figures as Coleridge, Wordsworth, Byron, Hazlitt, Lamb, DeQuincey, and others.
- EN 541 Studies in the Novel (3 crs.)**
A close reading of the major and minor works of several novelists chosen from a single period. Emphasis will be placed on the development of each novelist within a specific literary and historical context. The period under consideration will vary from year to year.
- EN 543 Studies in Eighteenth-Century British Poetry (3 crs.)**
A study of the development of British poetry in the eighteenth century, focusing on such poets as Pope, Gray, Thomson, Johnson, and Cowper.
- EN 551 American Transcendentalism (3 crs.)**
An investigation of the development and influence of American Transcendentalism in the literature of Emerson, Thoreau, Alcott, Margaret Fuller, Theodore Parker, and others.

English

- EN 562 Studies in Modern Drama (3 crs.)**
An investigation of the developments of various movements of modern drama in the works of Ibsen, Strindberg, Shaw, O'Neill, Pirandello, Beckett, Genet, Brecht, and other experimental and traditional playwrights.
- EN 570 Graduate Seminar in American Literature (3 crs.)**
An in-depth study of a particular author, group of authors, or theme in American literature. Topics will change from year to year.
- EN 580 Graduate Seminar in English Literature (3 crs.)**
An in-depth study of a particular author, group of authors, or theme in English literature. Topics will change from year to year.
- EN 590 Graduate Seminar in World Literature (3 crs.)**
An in-depth study of a particular author, group of authors, or theme in world literature. Topics will change from year to year.



Department of Foreign Languages

Chairperson: Associate Professor Jacqueline Enos

Professor: Robert Arruda

Associate Professors: Robert Briggs, Anthony Cotugno,
Joseph Giannini, Stanley Hamilton, Lenore Padula,
Barbara Ward

Assistant Professors: Dale Dawley, Christiana Reordan

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS

The Foreign Language Department offers students an opportunity to gain practical working knowledge of one or more of six foreign languages. Students may choose any of these six languages offered by the department unless otherwise restricted by the requirements of their academic major. All students should check the specific foreign language requirement of their academic major. Students who are continuing the study of foreign languages at Bridgewater State College should do so at the earliest opportunity.

The department currently offers undergraduate majors in French or Spanish with academic minors possible in French, German, Spanish, Italian, Russian, and Portuguese. The department majors seek to develop a fluent command of the four language skills, and a broad acquaintance with the salient characteristics of the literature and civilization of the language being studied.

A grade of C or above in the 181-182 course sequence is required for continuation as a language major. Thirty-six semester hours are required for a foreign language major. In the fall of the sophomore, junior and senior years, language majors will participate in a departmental interview conducted in the foreign language. This interview is for diagnostic purposes. Foreign language majors are required to take all courses in numerical sequence, unless otherwise arranged with an advisor subject to approval by the head of the department.

For all prerequisites, equivalent course credit or preparation will be accepted.

FRENCH MAJOR

LF 181-182, LF 201, LF 252, LF 281, LF 301, LF 352, LF 381-382 (with a C or better if a Secondary Education minor), LF 401, LF 451; additional courses to complete credits for the major are selected in conjunction with the departmental advisor.

SPANISH MAJOR

LS 181-182, LS 201-202, LS 251-252, LS 281-282 (with a C or better if a Secondary Education minor), LS 292; additional courses to complete credits for the major are selected in conjunction with the departmental advisor.

LANGUAGE MINOR

Language minors are required to take 18 semester hours in the foreign language beginning with the 151-152 level course. The choice of subsequent courses may be determined in consultation with the department head.

HIGH SCHOOL EDUCATION MINOR

The requirements for teacher certification in Massachusetts have changed. Students should consult with the department chairperson concerning changes in program requirements. Programs leading to initial certification will include a full semester of student teaching. Graduate programs leading to an additional certificate will require the equivalent of a half-semester practicum. Specific course requirements for teachers of French, grades 9-12, and Spanish, grades 9-12, are listed under the Department of High School, Middle School and Adult Education.

Foreign Languages

GER REQUIREMENTS

All foreign language courses satisfy the GER/Humanities electives. All foreign language literature courses satisfy the GER/Literature requirement.

OVERSEAS STUDY OPPORTUNITIES

The Department of Foreign Languages urges its majors and minors to study abroad and can offer information on available study plans. Any student contemplating study abroad should consult the department with all pertinent documentation. Final acceptance of credit will be determined upon receipt of official transcripts and supporting material and, in some cases, may not be equivalent to the credits earned in a regular semester or year at Bridgewater.

GRADUATE PROGRAMS

MASTER OF ARTS IN TEACHING

The Department of Foreign Languages offers a program leading to the degree of Master of Arts in Teaching with a concentration in French or Spanish. The department requires an interview of all prospective candidates before making its final recommendation regarding admission to the program. The latter is designed primarily to meet the varied needs of graduate students who are currently teaching at the secondary school level. It also prepares students for further graduate work in foreign languages. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult the M.A.T. degree requirements in the Graduate School section of this catalogue), and a minimum of 18 appropriate credits in a single language (credits approved by the program advisor on the basis of the background, interests, and needs of the student). Language courses need not be taken in sequence.

In addition, appropriate courses offered by the Department may be taken as part of the Division's Master of Arts and Master of Arts in Teaching programs in Humanities.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all courses at the 100 level, LS 495, FL 300, and FL 499.

Foreign Languages

COURSE OFFERINGS*

FRENCH

- LF 101, 102 Elementary French I-II (3 crs. for each semester)**
An introduction to the essentials of written and spoken French.
- LF 151, 152 Intermediate French I-II (3 crs. for each semester)**
Stress on essential grammatical points, oral work, and reading knowledge of the language. (*Prerequisite: LF 102*)
- LF 181, 182 Advanced French I-II (3 crs. for each semester)**
A concentration on more advanced aspects of the spoken and written French language. Oral practice through individual classroom participation. Conducted in French. (*Prerequisite: LF 152*)
- LF 201 French Literature of the Middle Ages (3 crs.)**
A survey of representative works of the Middle Ages. Conducted in French. (*Prerequisite: LF 182*)
- LF 211 Twentieth-Century French-Canadian Writers (3 crs.)**
A study in depth of certain Canadian writers in French, with special emphasis on the "rural" novel and the poetry of the search for an identity. (*Prerequisite: LF 151-152 or its equivalent*)
- LF 222 Introduction to French-Canadian Literature (3 crs.)**
A survey of literature of Canada written in French, from writing of the clergy and missionaries to the novelists, poets and dramatists of the present day. (*Prerequisite: LF 151-152 or its equivalent*)
- LF 231 Eminent Realists and Naturalists in 19th Century French Literature in English Translation (3 crs.)**
A study of realism and naturalism (1850-1900), with special attention given to Flaubert, the Goncourts, Maupassant, Zola, and Huysmans.
- LF 241 French Literature of the Absurd in English Translation (3 crs.)**
A study of French "absurd" literature in translation, from Flaubert's *A Simple Heart* to "anti-literature" of the "new" novel. Emphasis on theatre.
- LF 252 Sixteenth Century French Literature (3 crs.)**
A study of the poetry, prose, and theatre of the sixteenth century, noting the transition from the late Middle Ages through the Renaissance. Conducted in French. (*Prerequisite: LF 201*)
- LF 261 Introduction to the Civilization and Language of French Canada (3 crs.)**
A composite view of the extension of French civilization in Canadian history, daily life, arts and sciences, literature, technology and above all, a study of differences in language usage. (*Prerequisite: LF 151-152 or its equivalent*)
- LF 281, 282 French Conversation and Civilization I-II (3 crs. for each semester)**
Improvement of oral expression and pronunciation. French Civilization discussion topics for vocabulary building and application of structures learned. Conducted in French. (*Prerequisite: LF 182*)
- LF 301 Seventeenth Century French Literature (3 crs.)**
The principal historical events and representative authors and genres of France of the seventeenth century will be studied with the objective of understanding Classicism as a literary movement. Conducted in French. (*Prerequisite: LF 252*)
- LF 352 Eighteenth Century French Literature (3 crs.)**
The literary contributions of the Enlightenment and Encyclopedists to the French Revolution and pre-romanticism. Conducted in French. (*Prerequisite: LF 301*)

*See page 68 for general information regarding course offerings

Foreign Languages

- LF 381 Applied French Linguistics and Phonetics (3 crs.)**
A linguistic approach to the sounds of the French language with emphasis on a mastery of the elements of correct standard pronunciation. Conducted in French. (*Prerequisite: LF 182*)
- LF 382 Advanced French Composition and Grammar (3 crs.)**
A thorough study of French grammar to develop written and oral proficiency in the French language. Conducted in French. (*Prerequisite: LF 381*)
- LF 401 Nineteenth Century French Literature (3 crs.)**
Through representative works, the entire nineteenth century will be surveyed with special emphasis on principal literary movements: Romanticism, Realism, and Symbolism. Conducted in French. (*Prerequisite: LF 352*)
- LF 451 Twentieth Century French Literature (3 crs.)**
A discussion of literary trends and readings of well-known authors. Individual reports. Barres, France, Gide, Proust, Claudel, Romains, Sartre, Camus. Conducted in French. (*Prerequisite: LF 352*)
- LF 495 Seminar in French Literature (3 crs.)**
Primarily for French majors or minors of senior standing. Honors candidates or graduate students. The seminar will pursue, in depth, certain themes and authors in French literature. The topics will change from year to year. Offered as needed. Conducted in French. (*Prerequisite: Permission of the Instructor*)
- LF 501, 502 Graduate Seminar in French Literature I-II (3 crs. for each semester)**
An in-depth survey of approximately eight centuries of French Literature, with emphasis on oral and written analyses of special literary problems. Designed primarily for MAT degree candidates, already having some knowledge of French literature. Conducted in French.
- LF 503 Personalities in French Civilization (3 crs.)**
A review of French civilization through analyses of the contributions of a selection of her national heroes. Intended for, but not necessarily limited to, holders of an undergraduate degree in French. Conducted in French. (*Prerequisite: Consent of the Instructor*)
- LF 504 French Civilization Since 1944 (3 crs.)**
Social, political, geographic, economic and literary dimensions of French civilization since the second World War. Conducted in French.

GERMAN

- LG 101, 102 Elementary German I-II (3 crs. for each semester)**
An introduction to the study of the German language. Emphasis on correct pronunciation and basic grammar.
- LG 151, 152 Intermediate German I-II (3 crs. for each semester)**
A systematic review of basic German grammar. Graded reading selections and an introduction to aspects of German culture. (*Prerequisite: LG 102*)
- LG 181, 182 Advanced German I-II (3 crs. for each semester)**
Introduction to a more advanced level of the literature. Representative authors will be read and discussed. (*Prerequisite: LG 152*)
- LG 191, 192 Scientific German I-II (3 crs. for each semester)**
An introduction to the reading and translating of scientific material. Open to science majors as a substitution for LG 151, 152. (*Prerequisite: LG 102*)
- LG 201, 202 Survey of German Literature I-II (3 crs. for each semester)**
German literature from its earliest beginnings to the present day. Representative works of the principal literary periods will be read and discussed. Conducted in German. (*Prerequisite: LG 182*)

Foreign Languages

- LG 262 German Life and Literature under Hitler in English (3 crs.)**
This course will treat German life and literature prior to the rise of Hitler and show the influence of the Nazi period on the life styles and literary developments in all German speaking countries. Readings in German or English will accompany the eyewitness commentaries. Conducted in English.
- LG 272 Aspects of German Culture and Civilization in English (3 crs.)**
The course will examine and analyze selected aspects of German culture and civilization in terms of the importance these have had in shaping the development of the German-speaking nations. Conducted in English.
- LG 282 German Conversation and Civilization (3 crs.)**
Designed to develop further the student's command of spoken German. Discussion topics will center upon aspects of German civilization and culture. Conducted in German. (*Prerequisite: LG 182*)
- LG 301 Modern German Literature (3 crs.)**
Ideas and literary currents of the modern period as expressed in the works of representative authors. Conducted in German. (*Prerequisite: LG 202*)
- LG 310 The Modern German Novel in English Translation (3 crs.)**
The German novel since World War I with emphasis on works by Thomas Mann, Herman Hesse, Gunter Grass, Heinrich Boll.
- LG 320 Contemporary German Drama in English Translation (3 crs.)**
Trends in twentieth century drama before and after World War II including works by Bertold Brecht, Friedrich Durrenmatt, Peter Weiss, and others.
- LG 330 Major German Writers in English Translation (3 crs.)**
Selected works by major German writers.
- LG 340 The German Novella in English Translation (3 crs.)**
The novella as a literary genre and selected works by major writers.
- LG 351 German Romanticism (3 crs.)**
Romanticism as a literary movement. A study of its philosophical basis, themes and forms as reflected in representative works of the period. Conducted in German. (*Prerequisite: LG 202*)
- LG 460 Seminar in German Literature (3 crs.)**
Study of particular authors and their works and/or selected literary movements. Topics vary; course may be repeated; limited enrollment. Conducted in German. (*Prerequisite: Consent of the Instructor*)

ITALIAN

- LT 101, 102 Elementary Italian I-II (3 crs. for each semester)**
An aural-oral approach to the grammar of the Italian language. Emphasis is on the mastery of correct pronunciation and of fundamental grammatical points to ensure a basic, oral, reading, and written command of the language.
- LT 151, 152 Intermediate Italian I-II (3 crs. for each semester)**
A continuation of Elementary Italian, with stress on essential grammatical features, oral work, and reading and writing development in the language. (*Prerequisite: LT 102*)
- LT 181, 182 Advanced Italian I-II (3 crs. for each semester)**
A review of basic grammar and presentation of more advanced structural elements. Stress on improvement of compositional and aural-oral skills. Varied cultural reading selections. Conducted in Italian. (*Prerequisite: LT 152*)

Foreign Languages

PORTUGUESE

- LP 101, 102** **Elementary Portuguese I-II (3 crs. for each semester)**
An introduction to the basic skills of reading and writing, and the development of aural comprehension and correct oral pronunciation.
- LP 151, 152** **Intermediate Portuguese I-II (3 crs. for each semester)**
A review of basic grammar and pronunciation and a more advanced study of these two aspects of the language. Reading, writing, and oral proficiency will be stressed. (*Prerequisite: LP 102*)
- LP 181, 182** **Advanced Portuguese I-II (3 crs. for each semester)**
Stress on improvement of compositional and aural-oral skills. Literary texts from Brazilian and Portuguese literature. Conducted in Portuguese. (*Prerequisite: LP 152*)

RUSSIAN

- LR 101, 102** **Elementary Russian I-II (3 crs. for each semester)**
Introduction to Slavic Civilization. Familiarization with Russian script, pronunciation, and basic structure. Programmed units leading to reading of newspapers and short stories of Russian masters.
- LR 151, 152** **Intermediate Russian I-II (3 crs. for each semester)**
Review and expansion of fundamentals with more detailed reading and analysis of structure. Emphasis will be placed on scientific Russian in other majors as requested by the student. (*Prerequisite: LR 102*)
- LR 181, 182** **Advanced Russian I-II (3 crs. for each semester)**
Translation of scientific and literary texts, directed reading and reports. Translation methods and practice. Improving oral and writing skills. Conducted in Russian. (*Prerequisite: LR 152*)

SPANISH

- LS 101, 102** **Elementary Spanish I-II (3 crs. for each semester)**
An introduction to the essentials of Spanish pronunciation and grammar. Reading, writing, aural and oral proficiency will be stressed.
- LS 110** **Conversational Spanish for Medical Personnel (3 crs.)**
This will be a one semester course specifically designed for nursing personnel with respect to approach and content. The approach will be oral; the goals are those of speaking and understanding. The content deals with situations relevant to the nursing profession, and is conducted in Spanish. *Does not satisfy GER.*
- LS 151, 152** **Intermediate Spanish I-II (3 crs. for each semester)**
A review of basic grammar and correct pronunciation to further an aural-oral command of the language. Hispanic readings will be introduced. May not be taken if LS 161 or LS 162 have been successfully completed. (*Prerequisite: LS 102*)
- LS 161, 162** **Practical Spanish I-II (3 crs. for each semester)**
An oral emphasis approach to learning Spanish for career related situations involving social work, police and fire departments, schools, hospitals and community agencies. May not be taken if LS 151 or LS 152 have been successfully completed. (*Prerequisite: LS 102 or consent of the Instructor*)
- LS 181, 182** **Advanced Spanish I-II (3 crs. for each semester)**
A more detailed study of Spanish grammar. Vocabulary development, correct pronunciation, and improved aural-oral skills. Reading from Hispanic world. Conducted in Spanish. (*Prerequisite: LS 152*)
- LS 210** **Latin American Poetry in English Translation (3 crs.)**
Modernism and after. Modernist, post modernist and vanguard poetry. The major figures: Marti, Dario, Mistral, Neruo, Vallejo, Paz.

Foreign Languages

- LS 220 The Contemporary Latin American Novel in English Translation (3 crs.)**
The development of the Latin American novel, focusing on post WW II authors: Cortazar, Garcia Marquez, Vargas Llosa, Fuentes, Carpentier, etc.
- LS 230 Contemporary Latin American Short Story in English Translation (3 crs.)**
Reality and fantasy as the focus of the stories of Borges, Cortazar, Fuentes, Rulfo, Carpentier, Arreola, Asturias, Garcia Marquez, Guimaraes Rosa.
- LS 281 Advanced Composition (3 crs.)**
Development of individual written expression. Utilization of literary texts as an approach to composition by focusing on vocabulary, analysis of style and context. Conducted in Spanish. (*Prerequisite: LS 182*)
- LS 282 Spanish Phonetics and Conversation (3 crs.)**
Improvement of oral proficiency by a systematic study of the sounds of correct pronunciation. Conducted in Spanish. (*Prerequisite: LS 182*)
- LS 291 Spanish Civilization (3 crs.)**
An introduction to the history, geography, social institutions, and culture of Spain. Assigned compositions. Conducted in Spanish. (*Prerequisite: LS 182*)
- LS 292 Spanish-American Civilization (3 crs.)**
An introduction to the history, geography, social institutions, and culture of Spanish America. Assigned compositions. Conducted in Spanish. (*Prerequisite: LS 182*)
- LS 301 The Golden Age of Spanish Literature (3 crs.)**
A study of the poetry, prose and theatre from the second half of the sixteenth century to the Baroque period. Conducted in Spanish. (*Prerequisite: LS 182*)
- LS 310 Contemporary Latin American Short Story (3 crs.)**
Reality and fantasy as the focus of the stories of Borges, Cortazar, Fuentes, Rulfo, Carpentier, Arreola, Asturias, Garcia Marquez. Conducted in Spanish. (*Prerequisite: LS 341, 342 or equivalent*)
- LS 320 Latin American Poetry (3 crs.)**
Modernism and after. Modernist, post modernist and vanguard poetry. The major figures: Marti, Dario, Mistral, Neruo, Vallejo, Paz. Conducted in Spanish. (*Prerequisite: LS 341, 342 or equivalent*)
- LS 331, 332 Survey of Spanish-American Literature I-II (3 crs. for each semester)**
A representative study of the literature of the Colonial period, the independence period, the eighteenth century, Modernism, and the contemporary period. Conducted in Spanish. (*Prerequisite: LS 182*)
- LS 341, 342 Survey of Spanish Literature I-II (3 crs. for each semester)**
Major literary movements, works and authors of penninsular Spanish literature from earliest times to the present. Conducted in Spanish. (*Prerequisite: LS 182*)
- LS 351 Cervantes (3 crs.)**
A study of the man and his works, with special emphasis on Don Quixote. Conducted in Spanish. (*Prerequisite: LS 331*)
- LS 381 The Middle Ages (3 crs.)**
A study of the evolution of Spanish literature through the first half of the sixteenth century. Romances, Poema del Cid, La Celestina, El Libro de Buen Amor. Conducted in Spanish. (*Prerequisite: LS 182*)
- LS 401 Nineteenth Century Spanish Literature (3 crs.)**
The Romantic and Realist Movements. Representative works of the novel, poetry, and drama. Conducted in Spanish. (*Prerequisite: LS 331*)
- LS 410 Latin American Novel: Early 20th Century (3 crs.)**
Early 20th century development of the novel in Latin America; will introduce Realist, Indianist, and Mexican Revolution-Novels. Major authors: Azuela, Icaza, Rivera, Alegria, Gallegos, Isaacs, Marmol, etc. Conducted in Spanish. (*Prerequisite: LS 341, 342 or equivalent*)

Foreign Languages

- LS 420 The Contemporary Latin American Novel (3 crs.)**
The development of the Latin American novel, focusing on post WW II authors: Cortazar, Garcia Marquez, Vargas Llosa, Fuentes, Carpentier, etc. Conducted in Spanish. (*Prerequisite: LS 341, 342 or equivalent*)
- LS 451 Twentieth Century Spanish Literature (3 crs.)**
The Spanish novel, essay, poetry, and drama from the Generation of '98 to the present. Conducted in Spanish. (*Prerequisite: LS 332*)
- LS 495 Seminar in Spanish or Spanish American Literature (3 crs.)**
This seminar is limited to seniors of honor standing. It will pursue in depth selected topics and authors of the specific literature. To be offered as required to qualified students. (*Prerequisite: Consent of the Department*)
- LS 507 Advanced Composition and Stylistics for Graduate Students (3 crs.)**
Review of advanced grammar. Exercises in translation from English into Spanish of literary and critical materials. Free composition and training in the use of stylistic devices. Conducted in Spanish. (*Prerequisite: LS 181 or LS 281*)
- LS 511, 512 Masterpieces of Spanish-American Literature I-II (3 crs. for each semester)**
An intensive study of selected works from the Conquest period, Colonial period, Modernism, and the twentieth century. Conducted in Spanish. (*Prerequisite: LS 281 or consent of the Instructor*)
- LS 520 Topics in Spanish-American Civilization (3 crs.)**
A study of Spanish-American thought and culture as expressed in its history, essay, art and literature. Conducted in Spanish. (*Prerequisite: LS 281 or consent of the Instructor*)
- LS 521 Topics in Spanish Civilization (3 crs.)**
A study of Spanish thought and culture as expressed in its history, essay, art and literature. Conducted in Spanish. (*Prerequisite: LS 281 or consent of the Instructor*)
- LS 525 Masterpieces of Spanish Literature I (3 crs.)**
An intensive study of selected works from the Middle Ages to 1700 including: *Poema de Mio Cid*, *El romancero*, *El libro de buen amor*, *La Celestina*, *El Renacimiento*, *El Siglo de Oro*. Conducted in Spanish. (*Prerequisite: LS 281 or consent of the Instructor*)
- LS 526 Masterpieces of Spanish Literature II (3 crs.)**
An intensive study of selected works of Twentieth Century authors including: Ruben Dario, Miguel de Unamuno, Pio Baroja, Juan Ramon Jimenez, Federico Garcia Lorca, Camilo Jose Cela, Ana Maria Matute, Juan Goytisolo, Antonio Buero Vallejo. Conducted in Spanish. (*Prerequisite: LS 281 or consent of the Instructor*)
- FL 300 Languages of the World (3 crs.)**
An introduction to linguistic approaches of the major languages of the world. Comparing English with other languages, the course demonstrates how any language system may work. The aim is to provide the students with an understanding of comparative linguistic structure and dynamics that will help them acquire new languages through a rational program of self-study.
- FL 310 Comparative Medieval Romance Literatures in English Translation (3 crs.)**
A study of representative medieval poetry, prose, theater of French, Spanish, and Italian literatures. Works read will include *The Song of Roland*, romances of the Arthurian cycle, *The Cid*, *The Book of Good Love*, and Italian prose and poetry before the *Divine Comedy*.
- FL 311 Dante and Medieval Culture in Translation (3 crs.)**
Life and culture of the Middle Ages approached through a close investigation of Dante's *Divine Comedy*.
- FL 498 Internship in Foreign Languages (3-15 crs.)**
An off-campus experience to expand the cultural and occupational potential of the student using a foreign language in a working environment.

Foreign Languages

- FL 499 Directed Study in Foreign Languages (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- FL 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- FL 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.



Department of Music

Chairperson: Ian Johnstone
Professor: Kenneth Falkner
Associate Professors: Maxine Asselin, Dorothy Ferry,
Vincent Gannon, Jacob Liberles
Assistant Professor: Henry Santos

UNDERGRADUATE PROGRAMS

The Music Department offers a minor in music for the liberal arts and elementary education majors, courses for the humanities elective requirement, private and class instruction in piano and voice, and performing organizations for the student who wishes to take a more active part in music.

Students must notify and receive approval from the department chairperson for acceptance into the music program. A grade of C or better is expected of all music course work in the minor, as well as membership in one performing organization.

MUSIC MINOR FOR LIBERAL ARTS STUDENTS

3 credits in voice: MU 131/331, MU 130 or 230; or
3 credits in piano: MU 141/341, or MU 240;
MU 171, MU 172, MU 160;
Select from MU 320, MU 360, MU 361, MU 364, MU 367, MU 368, MU 370, to total 21 credits.

MUSIC MINOR FOR ELEMENTARY AND SPECIAL EDUCATION STUDENTS

MU 130 or 230, MU 140 and 240, MU 160 or 360, MU 255, plus two additional courses as selected in conjunction with the music department chairperson.

GRADUATE PROGRAMS

The Department of Music offers courses at the graduate level which may be taken in the Division's Master of Arts in Teaching and CAGS programs in creative arts. A diverse and appropriate program of study in music is ensured when the student works closely with the advisor in course selection.

More detailed information regarding this program may be found under the Division of Humanities and Creative Arts, as well as in the Graduate School section of this catalogue.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: any course at the 100 level, MU 230, MU 240, MU 331, MU 341, and MU 499.

Music

COURSE OFFERINGS*

- ‡MU 113 **Stage Band (1 cr.)**
A performing group limited to twenty students in a laboratory experience which stresses basic musicianship, analysis of form and style, ensemble playing, and improvisation. One three-hour period weekly. (*Prerequisite: Consent of the Instructor*)
- ‡MU 115 **Instrumental Ensemble (1 cr.)**
A mixed group of instruments which performs music originally written for that particular combination of instruments. Ensemble formed as the occasion demands. One three-hour period weekly. (*Prerequisite: Consent of the Instructor*)
- ‡MU 117 **Women's Glee Club (1 cr.)**
Open to all female students who like to sing. Performances are given during the year which include traditional and folk songs, emphasizing music written for women's choir.
- ‡MU 118 **Chorale (1 cr.)**
A selected group of mixed voices which performs works representative of many periods of music and presents concerts throughout the academic year, at times with other college groups on and off campus. Three periods weekly. (*Prerequisite: Consent of the Instructor*)
- ‡MU 119 **Vocal Ensemble (1 cr.)**
A mixed group of voices which is organized to perform a particular type of music. Ensemble formed as the occasion demands. Three periods weekly. (*Prerequisite: Consent of the Instructor*)
- MU 130 **Voice Class I (3 crs.)**
Correct posture, breathing, and control are studied as well as ways of correcting individual voice problems, repertoire, solfeggio.
- MU 131 **Applied Voice I (1 cr.)**
Private lessons in voice for the beginning student and those with a limited background in singing. Basic concepts in posture, breathing, diction and vocalises stressed. Solo material selected from vocal literature in English with an introduction to literature in a foreign language. One half-hour period weekly. May be repeated for credit. (*Prerequisite: Consent of the Instructor*)
- MU 140 **Class Piano I (3 crs.)**
For beginning piano students who desire a fundamental approach to the keyboard. Required of elementary education majors who have elected music as a concentration or a minor. Includes correct use of the hands at the keyboard, playing of simple scales and chords, arpeggios and simple melodies; scale construction and use of I, IV and V chords.
- MU 141 **Applied Piano I (1 cr.)**
Private instructions for the beginning piano student and those with limited background in piano. Material selected according to the ability of the student. One half-hour period weekly. May be repeated for credit. (*Prerequisite: Consent of the Instructor*)
- MU 150 **Classroom Music (3 crs.)**
An integrated approach to the use of music in the elementary school which serves to enhance the student's knowledge and ability to use music in the classroom.

‡From MU 113, 115, 117, 118 and 119, and from any and all co-curricular activities in which a student might wish to participate and for which the College grants or may decide to grant credit in the future, a student may accumulate not more than one (1) credit per semester, nor more than two (2) per year, nor more than six (6) per college career.

*See page 68 for general information regarding course offerings

Music

- MU 160 Listening to Music (3 crs.)**
A non-technical humanities elective which explores music from the Baroque through contemporary periods with emphasis on how to listen to music intelligently. Selected works by the masters include symphonies, concertos, oratorios, operas, and smaller works which are used for study, listening and discussion.
- MU 170 Basic Music (3 crs.)**
A basic technical study which serves as an introduction to the study of harmony, a foundation to advanced courses in music literature and offers the student an opportunity to discover whether or not he would like to continue with the study of music.
- MU 171 Music Theory I (3 crs.)**
Beginning harmony and counterpoint: writing in small forms and chorale harmonizations, written exercises, ear training and keyboard work. (*Prerequisite: MU 140, MU 170, or consent of the Instructor*)
- MU 172 Music Theory II (3 crs.)**
A continuing technical course in the study of 18th and 19th century harmony. Seventh chords through chords of the augmented sixth. Figured bass, analysis, harmonization of melody. Principles of strict counterpoint continued.
- MU 230 Voice Class II (3 crs.)**
A continuation of Voice Class I dealing with further development of German lieder and performance practices. (*Prerequisite: MU 130 or consent of the Instructor*)
- MU 240 Class Piano II (3 crs.)**
A continuation of MU 140 with advanced keyboard work and more difficult melodies and rhythmic patterns. Use of II, III and VI chords, simple modulations, and keyboard harmony. (*Prerequisite: MU 140 or consent of the Instructor*)
- MU 251 Conducting (3 crs.)**
A course for education majors who have elected music as a minor and open to other students with permission of the Instructor. Investigation and study of problems in choral singing, the voice, rehearsal and conducting technique, elementary and advanced choral literature. Melodic and rhythmic dictation is included. (*Prerequisite: Consent of the Instructor*)
- MU 255 Music Materials for Elementary Teachers (3 crs.)**
For those who wish to become more actively involved with music in the classroom. Includes singing, use of instruments, listening, reading music, and rhythmic activity. (*Prerequisite: MU 150, 170 or consent of the Instructor*)
- MU 270 Sightsinging and Ear Training (3 crs.)**
This course attempts to raise the level of competency in music reading through series of graded solfege and ear training exercises.
- MU 320 Class Recorder (3 crs.)**
A study, through performance, of music representing the various style periods. Ensembles are organized according to the requirements of a particular composition. Problems in developing recorder technique and music fundamentals are dealt with as they are encountered through playing the instrument. (*Prerequisite: Permission of the Instructor*)
- MU 331 Applied Voice II (1 cr.)**
Private lessons in voice for those who have satisfied the requirements of MU 131. A continuation of vocalises, breath and tone control, solo material from the literature of German, French, and Italian composers as well as contemporary works in English. One half-hour period weekly. May be repeated for credit.
- MU 341 Applied Piano II (1 cr.)**
For the advanced student of piano who wishes to improve his ability at the keyboard. Material selected according to the ability of the student. One half-hour period weekly. May be repeated for credit. (*Prerequisite: MU 141 or consent of the Instructor*)

Music

- MU 355 Creative Activities in Elementary School Music (3 crs.)**
Practical experience offered in free and directed rhythmic responses, use of melody, percussion and chording instruments, use of the piano, and singing activities. (*Prerequisite: MU 150, 170 or consent of the Instructor*)
- MU 360 Listening and Analysis of Music (3 crs.)**
An advanced course in the development of music with a study of style, form and structure through analysis, listening, and discussion. (*Prerequisite: MU 150, 170 or consent of the Instructor*)
- MU 361 Forces in Modern American Music: Jazz (3 crs.)**
The course will trace the development of Jazz from 1890 to the present, noting its relation to the mainstream of American Music and its influence on European composers and listeners.
- MU 364 Music for the Classical and Romantic Periods (3 crs.)**
A study of orchestral, choral and chamber music of these two periods through readings, lecture, listening and discussion. (*Prerequisite: MU 160 or consent of the Instructor*)
- MU 367 Black Music of the New World (3 crs.)**
An introduction and guide to the history of black American musicians and a survey of other ethnic composers of the Americas. Contributions of the Afro-American style as it has enriched the European-based musical tradition of the United States primarily, and other countries in the New World.
- MU 368 Folk Music of Canada (3 crs.)**
Open to all students and may be taken as part of the Canadian Studies minor. A non-technical elective which explores the earliest folk music of the Indians and Eskimos through the lively airs of the French and nostalgic ballads of England, Ireland and Scotland. The folk music of other ethnic groups in Canada will also be explored.
- MU 370 Creating Music (3 crs.)**
An exploration and organization of the many sounds around us to create music. Skills in performance and knowledge of music fundamentals are utilized and continually developed. All creative endeavors are performed, discussed and evaluated in class.
- MU 413 Advanced Choral Conducting (3 crs.)**
Investigation and application of advanced conducting techniques to better equip the student to develop a fine choral ensemble. (*Prerequisite: MU 251 or equivalent*)
- MU 453 Music for Early Childhood (3 crs.)**
Designed for elementary education students, teachers and those interested in primary grades. The study of music as it relates to the developmental process of children of nursery, kindergarten and primary grades. Program planning, activities and materials which help promote musical growth in children and music skills for the teacher. Special attention is given to singing, listening and use of recorded materials. (*Prerequisite: Permission of the Instructor*)
- MU 456 Introduction to Orff - Schulwerk (3 crs.)**
Carl Orff's approach to music education for teachers and others who work with children in kindergarten through grade six. Basic principles, concepts, procedures, and skills will be explored as they relate to the Orff-Schulwerk philosophy. Activities will include chanting, singing, and the playing of recorders, percussion, and tuned-barred instruments. (*Prerequisite: Consent of the Instructor*)
- MU 499 Directed Study in Music (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- MU 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- MU 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

Music

- MU 511 Advanced Choral Literature (3 crs.)**
Study and preparation of music from varied historical style periods with primary emphasis on polychordal music, American composers and Avant Garde music. (*Prerequisite: MU 251 or permission of the Instructor*)
- MU 512 Contemporary Trends in Choral Literature (3 crs.)**
Study and preparation of the newest styles and techniques of current choral composers ranging from spoken chorus to choral dramatics. (*Prerequisite: MU 251 or permission of the Instructor*)
- MU 552 Seminar in Music Education Problems (3 crs.)**
After current problems in the music education field have been recognized and analyzed, an attempt will be made to arrive at reasonable solutions which are educationally and musically sound. (*Prerequisite: MU 251 or permission of the Instructor*)
- MU 553 Contemporary Trends in Music Education (3 crs.)**
Discussion, exploration and evaluation of new projects, ideas and philosophies in music education since 1950. Includes study of Impact, Contemporary Music Project, Yale Seminar, Julliard Repertory Project, Manhattanville Music Curriculum, trends in college curricula, the Music Laboratory as a new structure for learning, and new trends in the art of music and its application to the classroom. (*Prerequisite: MU 255 or consent of the Instructor*)
- MU 554 Research in Music Education (3 crs.)**
Sources, methods and types of research used in scholarly inquiry, including techniques used in planning and conducting a survey.
- MU 561 Music and Communication (3 crs.)**
Critical approaches to music and its relation to the other arts and ideas. The course will stress student thinking about what music is and what music does. (*Prerequisite: MU 160 or equivalent*)



—Professor Henry Santos, Department of Music—

Department of Philosophy and Religious Studies

Chairperson: Associate Professor Edward James

Professors: Milton Boyle, David Cheney

Associate Professors: Achille Joyal, Steven Sanders

Professor of Education/Philosophy: Robert E. Fitzgibbons

Philosophical inquiry aims at clear, logical, critical thinking about a variety of perennial human concerns. These include questions about values, the nature of knowledge and truth, the meaning of life, the understanding of experience, the possibility of religious knowledge, and many others. The Department offers courses in the main problems of philosophy, the history of philosophy, and the methods of philosophy as a mode of critical thinking.

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS

The department offers a major program in philosophy which involves study of the history of philosophy and the main problems of ethics, epistemology—metaphysics, logic and language and other elective areas.

PHILOSOPHY MAJOR

A minimum of ten philosophy courses (30 credits), with at least eight courses (24 credits) at the 300 or 400 level. A grade of "C" or higher is required in all philosophy course work contributing to the major. Philosophy majors intending to go to graduate school should develop proficiency in either French or German.

Satisfactory completion of at least one course in each of the following areas - Logic, Epistemology, Ethics and Philosophy of Mind - is normally required of all philosophy majors by completing the following sequence: PL 401, PL 402, PL 403, and PL 404.

PHILOSOPHY MINOR

For a minor in philosophy, a student must complete six philosophy courses (18 credits). Interested students should contact the chairperson in order to discuss an individual program relevant to the academic major.

RELIGIOUS STUDIES MINOR

The study of religion includes course offerings from several academic departments outside the parent, Department of Philosophy and Religious Studies. Students choosing this minor will be encouraged to represent as many different subject areas as is feasible and should elect courses only after consultation with the advisor in the Religious Studies Minor. The minor requires successful completion of six courses (18 hours) with at least two courses with RE or PR and the remaining credits from the following list:

- AN 207 Anthropology of Religion
- AN 211 Myth and Culture
- GS 300 Geography of the Bible
- HI 302 Jews & Christians in the Ancient Roman World
- HI 306 The Renaissance and Reformation
- SO 308 Sociology and Religion
- SO 321 Religion and Society in Asia

Biblical Greek and Hebrew are offered upon demand. From time to time new courses will be added to this list and occasionally appropriate topics courses and seminars are given. Questions should be directed to the advisor for the Religious Studies Minor, or the Chairperson of the Department of Philosophy and Religious Studies.

Philosophy & Religious Studies

GRADUATE PROGRAMS

The department does not offer a program in philosophy or religious studies at the master's degree level, but does participate in programs leading to the degrees of Master of Arts in Humanities and Master of Arts in Teaching with a concentration in humanities. Philosophy and religious studies courses, if approved by the faculty advisor, may be taken in partial fulfillment of master's degree requirements. More detailed information regarding these programs may be found under the Division of Humanities and Creative Arts, as well as in the Graduate School section of this catalogue.

The departmental offerings listed below include the following courses which may not be taken from graduate credit: all philosophy courses numbered at the 100 level, PL 401, PL 402, PL 403, PL 499, RE 100, and RE 499.



The Ivy Exercises at the turn of the century, a traditional part of graduation for many decades

Philosophy & Religious Studies

COURSE OFFERINGS*

PHILOSOPHY

- PL 100 Scepticism, Knowledge and Reality (3 crs.)**
An introduction to philosophy through an investigation of the relationship between the knower and the known, including such questions as: Why is there something rather than nothing? What, if anything, can I know? Of what, if anything, can I be certain? Does man discover or invent truth? Can I trust my senses to tell me about the world? Do my thoughts accurately represent things the way they actually exist? Do things exist when they are not being perceived? Are there proofs for believing that God exists? Do the above questions make any practical difference in my life?
- PL 110 Human Conduct and Values (3 crs.)**
An introduction to philosophy through a discussion of questions about morality, including: What is morality? Does everyone have his or her own morality, or is there something universal about morality? Is religion a sound basis for morality? Should the law be used to enforce morality? What are the most rational ways to resolve moral disagreements? Attention will be given to the application of the methods of sound reasoning to contemporary moral controversies.
- PL 120 Philosophies of Human Nature (3 crs.)**
An introduction to philosophy through an investigation of various theories of human nature--e.g. Christian, Marxist, behaviorist, materialist, existentialist, Platonist--and such questions as: What is a person? Who or what am I? Are human acts free or determined? Is it reasonable to believe in life after death? Are conscious experiences identical to brain processes?
- PL 130 Philosophy and Political Affairs (3 crs.)**
An introduction to philosophy through an examination of the problems of social and political philosophy, including: What is the purpose of government? What is the best form of government? On what basis should we evaluate government policies and actions? Toward what ideals should a society aspire? To what extent, if any, are we obligated to obey the law? To what extent should the state have authority over an individual's life--e.g., in the case of abortion, punishment, censorship, sexuality, euthanasia? What are rights and how do we get them? On what basis should society distribute its benefits and burdens?
- PL 140 Rational Thinking (3 crs.)**
An introduction to the principles and methods of sound reasoning and the basic ideas about rationality. Includes an examination of the nature of arguments; relevance; appeals to authority; intuition, observation, and evidence; testing, proof, and refutation; meaning, ambiguity, and vagueness; ethics and emotions in reasoning. Illustrations of these topics will be drawn from contemporary moral, social, and political issues and controversies.
- PL 150 Philosophy, Science and the Modern World (3 crs.)**
An introduction to philosophy through an examination of such questions concerning science in Western society as: Do science and religion conflict? Is there a scientific method? Are science and faith mutually exclusive? Is there a scientific view of persons? Are persons free? Do scientists as scientists have obligations to each other? - to the larger society? Does science show that all values are relative to a particular culture?
- All philosophy courses above the 100 level will normally have a prerequisite of one 100 level course. In addition, PL 350, PL 499, PL 502, and PL 503 will require consent of the Instructor and/or department.*
- PL 201 Theories of Happiness (3 crs.)**
Examination of theories of the nature of happiness. What is happiness? How can happiness be attained? Are the emotions a reliable guide to happiness? To what extent does being rational contribute to happiness? Discussion will include one or more of the following philosophers and schools of thought: Plato, Aristotle, Stoicism, Epicureanism, Judaism, Christianity, Spinoza, Mill, Dostoevsky, Schopenhauer, Nietzsche, Freud.

*See page 68 for general information regarding course offerings

Philosophy & Religious Studies

- PL 202 Practical Reasoning (3 crs.)**
A basic skills course designed to help the student in the areas of organizing ideas and reasoning about matters of practical interest, including strategies for dealing with disagreements; planning for goals and the future; resolving interpersonal conflicts of interest. Emphasis will be placed on in-class case analysis and problem solving involving editorials, advertising, statistics, cause-and-effect reasoning, and emotive language.
(Prerequisite: 3 credits in PL or PR)
- PL 204 Sex and Personal Relations (3 crs.)**
Philosophical exploration of issues, concepts, and arguments concerning sex and relations between persons, including our treatment of persons; feminism; sexism and the language of sex; sexual conduct and morality; sex and love versus sex without love; norms, values, and alternative sexual life-styles; pornography and respect for persons.
- PL 205 Medical Ethics: Issues of Life and Death (3 crs.)**
Is abortion ever justified? Is euthanasia ever justified? Does "the doctor" have the right to withhold information from patients? Does the patient ever have the right to refuse life-saving treatment? - or the particular forms of life-saving treatment? Do the parents or the society have the right to determine what is the best treatment, if any, for a child? Is suicide ever justifiable? What, if any, are the limits of scientific inquiry regarding persons and life? On what basis should limited medical resources be allocated? (Prerequisite: 3 credits in PL or PR)
- PL 322 Philosophy of Law (3 crs.)**
An examination of the problems of legal reasoning, the nature of justice, and the main theories of law--legal realism, legal positivism, natural law--and these issues: Should the law interfere with the liberty of individuals to do as they please? If so, for what purposes? How should the legal system regard those who violate the law as a matter of conscience? Does law create or acknowledge rights? How is legal responsibility determined? Is punishment rationally defensible?
- PL 324 Existentialism (3 crs.)**
Survey of the influence of Kierkegaard, Nietzsche, and Husserl on existentialism, followed by a study of the ideas of Sartre, Heidegger, and Jaspers about consciousness, freedom, value, choice, death, authenticity and inauthenticity.
- PL 325 Philosophy and the Arts (3 crs.)**
Inquiry into recurrent philosophical themes in literature and the fine arts, accompanied by an introduction to the fundamental problems of esthetics.
- PL 328 American Philosophy (3 crs.)**
A study of the major periods and thinkers of American thought--e.g., Puritanism and Jonathan Edwards, Enlightenment and Thomas Jefferson, Transcendentalism and Ralph Waldo Emerson, Naturalism and John Dewey, Pragmatism and William James, Idealism and Josiah Royce, Realism and Charles Sanders Peirce--as well as the ideas of contemporary thinkers.
- PL 350 Philosophy Seminar (3 crs.)**
Study of a particular philosopher and/or selected philosophical problems. Topics vary; course may be repeated.
(Prerequisite: Consent of the Instructor)
- PL 401 Logic (3 crs.)**
Develops the theory and technique of symbolic logic to expose hidden presuppositions, to distinguish valid from invalid reasoning, and to present precise, sound arguments of one's own.
- PL 402 Problems of Experience, Knowledge and Perception (3 crs.)**
An historical survey of the main issues and theories in epistemology, followed by contemporary views about such questions as: Does knowledge have a foundation or is it merely an historical achievement, reflecting cultural needs? Is there a distinction between knowledge and belief? Is it possible to validate procedures of inquiry while avoiding both dogmatism and circularity? Is there a rational basis for claims to know the future? Is perception a form of knowledge?
- PL 403 Ethical Theory (3 crs.)**
An historical survey of the main issues and theories in moral philosophy, followed by contemporary views about such questions as: What is the moral point of view? Does morality conflict with self-interest? Is it rational to be moral? Can we justify our most fundamental moral principles? Is there an objective way to choose between alternative moralities or life-styles? Why should we be moral?

Philosophy & Religious Studies

- PL 404 Theories of Mind (3 crs.)**
An historical survey of the main issues and theories in philosophical psychology, followed by contemporary views about such questions as: What is consciousness? Is consciousness identical to brain states? Are mind and body distinct entities? Can we ever know the thoughts and feelings of another person? Can thoughts influence physical events? Can machines think? Could we construct a robot with human feelings? -- and if so, would it have rights and obligations?
- PL 405 Philosophy of Language (3 crs.)**
Discussion of philosophical questions concerning language, thought, and reality, including: Is thought possible without language? Does a person's language determine the way in which he understands reality? Do different cultures define their own standards of rationality and truth? Are there innate ideas or structures? Do one's inner emotional states and feelings constitute a private language? What is the difference between saying something and meaning it and saying it without meaning it? What is understanding?
- PL 407 Philosophy of Science (3 crs.)**
Analysis of such questions as: What is a science? Does science have a method? If so, does its method make it superior to literature, religion, the "humanities"? Are terms like "electron", "gene", or "society" merely tools for prediction or do they refer to actual entities? What is the relation between the physical and social sciences? Should the social sciences seek to be like the physical sciences? Is history a science? Can or should the social sciences seek to avoid value claims?
- PL 499 Directed Study in Philosophy (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- PL 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- PL 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- The following interdisciplinary courses cover subjects which are of common concern to the fields of Philosophy and Religious Studies. They may be elected in partial fulfillment of requirements for the major in Philosophy and the minor in Religious Studies.*
- PR 170 Philosophical Thought and Religious Beliefs (3 crs.)**
The study of philosophy and the work of the philosopher through consideration of religious problems. Can God be proved by logic? by experience? or, can God only be known through faith? Is faith sufficient ground for knowledge? Are religion and science compatible? Satisfies the education requirement in philosophy.
- PR 251 The Meaning of Life (3 crs.)**
Discussion of questions that arise in our attempts to understand the meaning of life, including: Does life have a meaning? Does death deprive life of meaning? Does religion constitute the best, or final, answer to questions of the meaning of life? Is the meaning of life the same for everyone or does each individual give his own life meaning? Can we conclusively answer, or even rationally discuss, questions about the meaning of life? Includes an examination of religious, humanistic, and existentialist theories in the meaning of life.
- PR 252 Eastern Philosophies: Yoga, Hinduism, Buddhism, and Jainism (3 crs.)**
Do these religious philosophies, with their origin in India, differ in method or in content from Western philosophies? If so, do they have anything to teach Western Philosophy? What is the aim of meditation, if anything? Do all peoples share a single end — which is the escape from an illusory world? Are all people really one, reflecting or being an underlying One Reality? Should we speak of being a person rather than becoming one? In pursuing answers to these questions, it will be necessary to ask whether it is possible for one culture to understand another, whether there are standards of evidence and rationality which all cultures share and which allow various cultures to appraise each other.

Philosophy & Religious Studies

- PR 310 Religion and Science (3 crs.)**
A study of the relationships between Religion and the Sciences. Beginning with historical perspectives, the course will compare methods, language and issues.
- PR 351 Religion, Faith, and Reason (3 crs.)**
A critical examination of the nature and justification of religious claims, including discussion of: What are the grounds for belief or disbelief in God's existence? Is religious discourse meaningful? Do faith and reason conflict? Is belief in immortality intelligible and/or defensible? Is religious knowledge possible? Are revelation and religious experience reliable sources of truth? Is it rational to believe in miracles? Is atheism a religion?

RELIGIOUS STUDIES

- RE 201 Comparative Religion: Western (3 crs.)**
An examination of the origins, development, and basic tenets of the major world religions from earliest times to the Moslem era, with particular emphasis on ancient Near East religions: Judaism, Christianity, and Islam.
- RE 202 Comparative Religion: Eastern (3 crs.)**
An examination of the origins, development and basic tenets of major Eastern religions, including Hinduism, Buddhism, Taoism, Shintoism, and Confucianism.
- RE 221 Introduction to the Old Testament (3 crs.)**
Historical and cultural background; literature and interpretation of the Old Testament.
- RE 222 Introduction to the New Testament (3 crs.)**
Historical and cultural background; literature and interpretation of the New Testament.
- RE 251 Religion in Contemporary America (3 crs.)**
A consideration of the organization, practices and beliefs of current American religious organizations set in their historical and cultural perspectives. Roman Catholic, Eastern Orthodox, Jewish and Protestant denominations will be included in the study. The role of the church in the modern American community will be assessed and recent trends within and without the church will be discussed. The study will include such theological topics as Honest-to-God, God is Dead, The Theology of Hope, The Secular City and the so-called Jesus movement.
- RE/HI 300 Hellenistic Religions (3 crs.)**
The course will examine the survival of Greek religion in the empire of Alexander the Great and his successors, and the interaction of the Greek religion with the religions of the Ancient Near East under the new conditions and circumstances created by Alexander's conquests. (*Prerequisite: Satisfactory completion of requirements for 300 and 400 level history courses*)
- RE 315 Topics in Religious Studies (3 crs.)**
A one-semester course in which a special topic in the area of religious studies will be offered. (*Prerequisite: Consent of the Instructor*)
- RE 499 Directed Study in Religious Studies (3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- RE 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue. (*Prerequisite: Approval of the Advisor*)
- RE 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue. (*Prerequisite: Approval of the Advisor*)

Department of Speech Communication, Theatre Arts, and Communication Disorders

Chairperson: Assistant Professor Lee A. Dunne

Professors: Robert Barnett, John H. Lerch,
Richard J. Warye

Associate Professors: Sandra Briggs,
Stephen Levine, Joel Litvin

Assistant Professors: Sandra Brenckle, Arthur Dirks,
Cora Miller, Susan Miskelly,
Nancy Street, Joanne Wuschke

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS

Students majoring in this Department may choose one of three related concentrations: Speech Communication, Theatre Arts, or Communication Disorders.

Students enrolled in the Department must pass a Speech Proficiency Test before the end of their first year in the department.

In cooperation with the Department of Media and Librarianship, a minor in Radio and Television Operation and Production is available. For information on this minor, see the catalogue section *Undergraduate Multidisciplinary and Pre-Professional Programs*, and consult the department.

In cooperation with the English Department and other disciplines, a minor in Linguistics is available. For detailed information on the Linguistics minor see the catalogue section *Undergraduate Multidisciplinary and Pre-Professional Programs*.

SPEECH COMMUNICATION CONCENTRATION

Students selecting this concentration pursue a course of applied and theoretical studies in interpersonal relationships, small group communication, organizational communication, mass communication, public speaking, and debate. The minimum requirements include: CC 200, CC 210, CC 250, CC 260, CC 351, CC 450, CC 495, plus three additional elective courses.

SPEECH COMMUNICATION MINOR

CC 200, CC 210, plus twelve additional credits selected from Communication courses.

Speech Communication, Theatre Arts & Communication Disorders

COMMUNICATION DISORDERS CONCENTRATION

The concentration in Communication Disorders is a pre-professional program providing the necessary course work to continue in speech pathology, audiology or related fields at the graduate level. Courses in the specialization can be credited toward American Speech and Hearing Association Certification.

The minimum requirements include:

CC 200, CC 210, CD 220, CD 281, CD 291, CD 292, CD 340, plus additional courses selected in conjunction with a faculty advisor.

Through programs available in the department, at the undergraduate and graduate levels, a student is able to satisfy the Massachusetts state requirements for certification for a teacher of Children with Speech, Language or Hearing Disorders.

If state or national certification is sought, a student must consult with the department in planning a program.

COMMUNICATION DISORDERS MINOR

CC 200, CC 210, CD 220, CD 281, CD 291, CD 292

THEATRE CONCENTRATION

Students selecting this concentration follow a program designed to develop skills in and appreciation of those subjects related to performance and production in live theatre. The minimum requirements include:

CC 200, CC 210, CT 250, CT 380, CT 390, CT 395, CT 431, CT 432, plus two credits in CT 131 and two additional credits in CT 130 and/or CT 131.

THEATRE MINOR

CC 200, CC 210, CT 250, two credits in CT 130 and/or CT 131, plus nine additional credits selected from Theatre courses.

MINOR IN HIGH SCHOOL EDUCATION

Programs leading to initial certification will include a full semester of student teaching. Graduate programs leading to an additional certificate will require the equivalent of a half-semester practicum. Specific course requirements for teacher of Speech, grades 9-12, and teacher of Drama, grades 5-12, are also listed under the Department of High School, Middle School and Adult Education.

Speech Communication Concentration (Teacher of Speech 9-12)

Major courses: CC 200, CC 210, CC 250 or CC 351, CT 250, CC 260, CD 292, CT 310, CC 360 or CC 363, CC 452 or CC 486, CC 450, CC 495, plus one elective from among the following (CC 400, CT 330, CT 392, CT 390)

Cognate courses: None

Theatre Arts Concentration (Teacher of Drama 5-12)

Major courses: CC 200, CC 210, CC 250, CT 250, CD 292, CT 380, CT 390, CT 431, CT 432, CT 395, plus one course from among the following (CT 290, CT 310, CT 330, CT 392, CC 400, CT 420) plus four credits from CT 130 and/or CT 131

Cognate courses: one course from among the following (EN 215, EN 241, EN 242, EN 353, EN 356)

CO-CURRICULAR PROGRAMS

The Department of Speech Communication, Theatre Arts, and Communication Disorders has an active children's theatre program which provides two productions a year for school age children. Four student clubs are actively engaged in co-curricular activities supportive of the academic programs in the department.

The Forensic Society participates in intercollegiate competition in debate, group discussion, and individual speech competition in over fifteen separate categories including persuasive, informative, humorous speaking and oral interpretation of literature. Membership is open to all students with or without previous experience.

The Communication Club is open to all students for information/interchange on the professions related to the field of communication studies.

Speech Communication, Theatre Arts & Communication Disorders

The Bridgewater Chapter of the National Student Speech and Hearing Association is open to all students in the College Community with an interest in communication disorders. The group sponsors career counseling as well as professionally related workshops during the academic year.

The Ensemble Theatre, in cooperation with the theatre staff, produces two or three major theatrical productions a year and supervises studio productions which are directed by students.

The Creative Dance Group is open to all who like to dance and participate in the performance of original works.

CO-CURRICULAR CREDITS

Students may also receive credits in the department for active participation in debate, forensics, choral speaking, dance, or theatre (see CC 110, CT 120, CT 130, CT 131, and CT/PE 180).

GRADUATE PROGRAMS

MASTER OF ARTS IN COMMUNICATION STUDIES

The Department offers a program leading to the degree of Master of Arts in Communication Studies. Students develop a course of study with a concentration in either Communication or Communication Disorders.

Communication Concentration

Students selecting this graduate-level concentration pursue an advanced course of applied and theoretical studies in interpersonal relationships, small group communication, organizational communication, public speaking, and debate. The Communication concentration is designed primarily to prepare students for research, further graduate study, and professional development in such fields as administration, management, and human services. An undergraduate major in one of the disciplines within the scope of the Liberal Arts and Sciences is normally required for admission to this concentration. However, those who have training in other areas may request an interview with the Department of Speech Communication, Theatre Arts, and Communication Disorders.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described in the Graduate School section of this catalogue. Degree requirements include six credits of departmental requirements (CC 505 and CC 506), a minimum of eighteen credits in departmental electives which are appropriate to the degree and have been approved by the student's advisor, and a six credit thesis program. A minimum of thirty approved graduate credits is required for graduation. Additional information regarding the M.A. degree is provided in the Graduate School section of this catalogue.

Communication Disorders Concentration

The graduate-level concentration in Communication Disorders is designed to meet the course work and practicum standards for certification of the American Speech, Language, and Hearing Association. This program of study prepares the student for a professional career in speech pathology. For detailed information regarding ASHA certification standards, students should contact the Department.

An undergraduate major in Communication Disorders, or its equivalent, ordinarily is required for admission to this concentration. Students with academic backgrounds in related areas may have certain undergraduate courses to complete prior to beginning their graduate degree course work. For detailed information regarding admission to the program, contact the Department. A departmental interview is required.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described in the Graduate School section of this catalogue. Credit requirements for this concentration (minimum of 37) include:

Speech Communication, Theatre Arts & Communication Disorders

Core Courses

22-28 credits

GS 501 Graduate Program Planning	1 credit
CC 505 Communication Theories Overview	3 credits
CC 506 Communication Research Methods Overview	3 credits
CD 591 Acoustic Phonetics	3 credits
CD 595 Advanced Assessment and Interpretation in Communication Disorders	3 credits
EN 440 Topics in Linguistics	3 credits
CD 596-597 Graduate Clinical Practicum 1/11	6-12 credits

Total: 9-15 credits

Electives

CD 502 Research (Thesis)
CD 557 Introduction to Stuttering Theory and Therapy
CD 558 Aphasia in Adults
CD 590 Nonverbal and Augmentative Communication Systems
CD 593 Cleft Palate and Orofacial Anomalies
CD 599 Topical Studies in Communication Disorders
Appropriate CD 300 and CD 400 level course offerings

Additional information regarding the M.A. degree is provided in the Graduate School section of this catalogue.

MASTER OF ARTS IN TEACHING (SPEECH COMMUNICATION AND THEATRE)

The Department offers a program leading to the degree of Master of Arts in Teaching. This program is designed primarily to meet the varied needs of graduate students who are currently teaching communication and/or theatre. A diverse and appropriate program of study is ensured when the student works closely with the advisor in course selection. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this Catalogue.

Speech Communication and Theatre Arts courses may also be taken in the Division's Master of Arts in Teaching and CAGS programs in Creative Arts. More detailed information regarding these programs may be found under the Division of Humanities and Creative Arts as well as in the Graduate School section of this Catalogue.

The following two undergraduate level courses are prerequisites for the graduate course work offered by the department: CC 200 Dynamics of Human Communication and CT 250 Play Production. Additional undergraduate prerequisites in other departments may be required.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: CC courses below the 300 level, CC 499, CD courses below the 300 level, CD 496, CD 497, CD 499, CT courses below the 300 level, CT 498, and CT 499.

Speech Communication, Theatre Arts & Communication Disorders

COURSE OFFERINGS*

SPEECH COMMUNICATION

- ‡CC 110 **Forensics Practicum (1 cr.)**
Credit is given for sixty or more hours of intercollegiate debate and competitive speaking at intercollegiate tournaments.
- CC 200 **Dynamics of Human Communication (3 crs.)**
Provides an overview of basic communication theories of interpersonal communication, small group interaction, public speaking and mass communication. Skills practiced generally include interpersonal interactions, small group problem solving, public speaking and listening.
- CC 210 **Voice and Diction (3 crs.)**
Analysis of each student's habits of respiration, phonation, and articulation; exercises designed to correct poor habits. Physics and physiology of the vocal mechanism. Training in perception, differentiation, and production of the standard sounds of good American speech.
- CC 215 **Speech for Radio and Television (3 crs.)**
Study and practice of effective vocal styles and techniques, utilized for different types of mass communication messages including commercials, editorials, newscasts, and interviews. (*Prerequisite: CC 210 or consent of the Instructor*)
- CC 250 **Public Speaking (3 crs.)**
Study, evaluation and analysis of speech preparation with frequent practice of various speech types. Informative, persuasive, and special occasion topics emphasized.
- CC 255 **Business and Professional Speaking (3 crs.)**
Increases levels of competence in negotiating, interviewing, evaluating, leading and presentational skills. This course stresses abilities needed to attain cooperation and exert influence in corporate and public sector work environments.
- CC 260 **Group Communication and Decision-Making (3 crs.)**
Extends theoretical knowledge of small group behavior. Stress will be on implementation of theories in such areas as leadership, roles of group members, conflict management, reasoning, argument and problem solving.
- CC 300 **Developing Creativity (3 crs.)**
The purpose of this course is to increase the degree to which students recognize and nurture their creative potential, especially in sensing and meeting problems and challenges in all aspects of their academic and personal lives.
- CC 301 **Managing Messages: Introduction to Public Relations (3 crs.)**
This course provides the student with a knowledge of the history, goals, objectives and skills associated with the field of public relations. It offers students an opportunity to utilize acquired communication skills in a specific career area as well as giving students the opportunity to acquire writing, reasoning, listening, speaking and other skills required in public relations work. Case study analysis and hands-on applications are primary teaching/learning methodologies. (*Prerequisite: CC 200*)
- CC 310 **Introduction to Television (3 crs.)**
Television as a medium of communication in society and in the school. Study of the historical development of broadcasting and the current status of the medium. Active participation in developing skills of performance for uses as an educator, civic leader, or professional broadcaster. For juniors and seniors only.

‡Note: From the one-credit co-curricular activities, CC 110, CT 120, CT 130, CT 131, and CT/PE 180, and from any and all co-curricular activities for which the College grants credit, a student may accumulate not more than one credit per semester (two per year) nor more than six per four-year degree program.

*See page 68 for general information regarding course offerings

Speech Communication, Theatre Arts & Communication Disorders

- CC 320 Mass Communication in Society (3 crs.)**
A basic introduction to research and theory in mass communication by focusing on major social questions regarding the mass media and examining empirical research relevant to these questions.
- CC 351 Rhetoric and Persuasion (3 crs.)**
Study of the theory of persuasive speaking with frequent practice. (*Prerequisite: CC 250*)
- CC 360 Argumentation and Debate (3 crs.)**
Study and practice of analysis, research, and refutation of debate cases using a variety of formats.
- CC 363 Interpreting Communicative Behavior (3 crs.)**
The description and analysis of interpersonal interaction and human relationships as they occur in everyday settings from a non-psychological perspective.
- CC 365 Introduction to Intercultural Communication (3 crs.)**
Introduction to Intercultural Communication is a course designed to acquaint students with the factors which affect interpersonal relationships among people of differing cultural backgrounds. Foreign as well as native-born persons are encouraged to take the course. Course objectives are to enable students to become more sensitive to and tolerant of values and ideas expressed by others.
- CC 399 Topical Studies (3 crs.)**
Variable contemporary topics in communication.
- CC 400 Creative Techniques for Teaching (3 crs.)**
Story telling, creative dramatics, role playing, puppets, and masks, and other speech arts, and their practical application in teaching various subjects. (*Prerequisite: CC 200*)
- CC 450 Communicative Theory (3 crs.)**
An introduction to the nature and role of theories in understanding human communication and an exploration of various current communication theories and perspectives. Special attention will be paid to the practical and social consequences of accepting any theory. Not open to Freshmen except by special permission of the Department. (*Prerequisite: CC 200, 210, 250, 260, 351*)
- CC 452 Organizational Communication (3 crs.)**
Analysis of communication problems in modern complex organizations, theory and practice. (*Prerequisite: CC 200, 250 or 260*)
- CC 462 Patterns of International Communication (3 crs.)**
The study of communication systems throughout the world. Students will focus on media as it functions within a variety of political systems. (*Prerequisite: CC 200, CC 351, CC 320 or consent of the Instructor*)
- CC 495 Seminar in Communication (3 crs.)**
Study and application of research methods in the area of Communication Arts & Sciences, with particular emphasis on the individual student's interests in the discipline. (*Prerequisite: CC 450*)
- CC 498 Internship in Communication (3-15 crs.)**
A non-classroom experience designed for a limited number of junior and senior majors to complement their academic preparation. (*Prerequisite: Consent of the Department Chairperson*)
- CC 499 Directed Study in Communication (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- CC 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.

Speech Communication, Theatre Arts & Communication Disorders

- CC 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this Catalogue.
- CC 504 Communication Skills Overview (3 crs.)**
This course is designed to provide students an opportunity to review their basic communication skills at all major levels and, with the assistance of the instructor, to diagnose particular areas of strength and weakness to be reinforced or improved upon in subsequent graduate school courses. (*Prerequisite: CC 200 or equivalent*)
- CC 505 Communication Theories Overview (3 crs.)**
This course is designed to provide students with information concerning current developments in the field of communication theory and a basis for the generation of thesis research problems. Theoretical formulations in the areas of general semantics, rhetoric, interpersonal communication, intercultural communication, group dynamics and persuasion will be included. (*Prerequisite: CC 450 or equivalent*)
- CC 506 Communication Research Methods Overview (3 crs.)**
This course is designed to provide students with the tools necessary to create meaningful and competent thesis, research, and project plans. Quantitative and nonquantitative research are covered, as well as project creation. (*Prerequisite: CC 495 or equivalent*)
- CC 507 Speech Communication Education: Teaching Human Communication Courses in the College and University (3 crs.)**
This course provides an analysis of current objectives, problems, and methods of teaching communication at the college level. Selection and preparation of teaching materials will be discussed. Evaluation techniques will be introduced and critiqued. Methods of relating speech to other subject areas will be explored.
- CC 511 Laboratory in Interpersonal Communication (3 crs.)**
This course provides an extensive examination, diagnosis, and treatment of interpersonal communicative behavior of the individual. Emphasis is on the development and enrichment of interpersonal communicative skills and on theoretical perspectives for analyzing the structure of interpersonal communication. Interpersonal communication structures to be studied include communication as a ritual, role, game, personal strategy and a striving for intimacy.
- CC 512 Public Communication (3 crs.)**
An introduction to the methods of rhetorical research and historical critical inquiry as applied to the study of movement, issues, and speeches.
- CC 513 Laboratory in Small Group Communication (3 crs.)**
Extensive and intensive experience in small group communication focusing on group participation and leadership. Emphasis will be placed on the transmission, analysis, and processing of messages, and on the roles and functions of group membership.
- CC 514 Coaching and Directing Forensics (3 crs.)**
A study of the philosophies, problems, and techniques associated with forensic activities; recent trends and practices in co-curricular programs; critical evaluation of related research.
- CC 515 Male/Female Communication (3 crs.)**
A study of the gender variable in communication in four areas: 1) intrapersonal communication--socialization and self concept; 2) interpersonal relations between the sexes; 3) communication in structured groups; and 4) public communication--male and female orators.
- CC 516 Seminar in Intercultural Communication (3 crs.)**
Analysis and comparison of communicative styles in different cultures. Investigation of differences in messages, communicative forms, target persons, defensive styles, and interpersonal processes of establishing, developing, and terminating relationships.
- CC 520 Group Leadership (3 crs.)**
This course focuses on responsibilities, theories, and practices associated with group leadership.

Speech Communication, Theatre Arts & Communication Disorders

- CC 525 Seminar in Mass Communication (3 crs.)**
Examination of the audience of mass communication in terms of the uses and gratifications theories. (Prerequisite: CC 486 or equivalent)
- CC 530 Problems in Organization Communication: Diagnosis and Treatment (3 crs.)**
Analysis and treatment of specific common problems and communication breakdown and information overload in organizational structures. (Prerequisite: CC 452 or equivalent)
- CC 535 Seminar in Communication Theory (3 crs.)**
This course explores major communicative theories in depth.

COMMUNICATION DISORDERS

- CD 220 Introduction to Communication Disorders (3 crs.)**
An introduction to speech, language and hearing disorders in children and adults. Disorders of functional, structural and neurological etiologies will be discussed.
- CD 242 Beginning Sign Language (3 crs.)**
History and development of manual communication. Focus on American Sign Language and exact English through vocabulary development and beginning conversational skills.
- CD 281 Speech Anatomy and Physiology (3 crs.)**
Introduction to the study of the anatomy and physiology of systems involved in speech, language, and hearing, and their relationships to disorders of communication.
- CD 291 Phonetics (3 crs.)**
Analysis and transcription of speech sound systems.
- CD 292 Language Acquisition and Development (3 crs.)**
Interrelationships among linguistic neurophysiological, physical, intellectual, social, and cultural factors as they effect language acquisition in the child. Analysis of language development will be undertaken by students.
- CD 310 Articulation Disorders (3 crs.)**
Study of abnormal and normal phonological development using approaches such as distinctive feature theory, phonological process analysis, assessment and therapy procedures. (Prerequisite: CC 210, CD 220, CD 281, CD 291, CD 292, CD 320)
- CD 322 Language Disorders in Children (3 crs.)**
Etiology, diagnosis, evaluation and treatment of language-impaired children. Clinical case material will be discussed and analyzed. Both habilitative and rehabilitative procedures will be covered. (Prerequisite: CD 291, CD 292)
- CD 325 Voice Disorders in Children and Adults (3 crs.)**
An introto etiology, diagnosis, and remediation of voice disorders and associated pathological conditions. (Prerequisite: CD 220, CD 281, CD 291)
- CD 330 Speech and Hearing Science (3 crs.)**
An introductory course as it relates to normal aspects of speech, hearing, and language. Physiological elements of speech production, speech acoustics, auditory physiology and the psychophysics of sound reception. (Prerequisite: CD 281, CD 291)
- CD 340 Introduction to Audiology (3 crs.)**
Science of hearing; transmission and measurement of sound to the human ear, anatomy, physiology, and neurology of hearing mechanism. Related pathological conditions will be discussed. (Prerequisite: CD 281, CD 291)

Speech Communication, Theatre Arts & Communication Disorders

- CD 393 Aural Rehabilitation (3 crs.)**
Habilitation and rehabilitation for the hard of hearing including assessment and therapy procedures related to auditory training, speech reading, language therapy, and hearing aid training. Educational management and counseling strategies will also be addressed. (*Prerequisite: CD 340*)
- CD 399 Topical Studies (3 crs.)**
Variable contemporary topics in communication disorders.
- CD 456 Diagnosis and Evaluation of Communication Disorders (3 crs.)**
Objective of the course is to give the pre-practicum student understanding and skills in assessment and diagnosis of speech and language disorders in children and adults. CD 456 and CD 495 are taken in the fall semester of the senior year by all students who elect the state certification track. These courses may be taken by other Communication Disorders students only with the consent of the Instructor. (*Prerequisite: All required courses in the major as well as the following courses for certification must be completed - CD 310, CD 322, CD 330, CD 393; EN 323, and EN 440; PY 224, PY 226, PY 327*)
- CD 457 Introduction to Stuttering Theory and Therapy (3 crs.)**
A survey of stuttering theories and descriptive and intervention techniques. (*Prerequisite: CD 320*)
- CD 458 Aphasia in Adults (3 crs.)**
Consideration of neuroanatomy, etiologies, characteristic language and speech disorders, psychological correlates, classification systems, and diagnostic and rehabilitation procedures. (*Prerequisite: CD 220, CD 320, CD 330*)
- CD 495 Intervention Strategies in Communication Disorders (3 crs.)**
Intervention strategies for children and adults having speech, language, voice, rhythm, hearing and associated problems that interfere with communication. CD 456 and CD 495 are taken in the Fall semester of the senior year by all students who elect the state certification track. These courses may be taken by other Communication Disorders students only with the consent of the Instructor. (*Prerequisite: All required courses in the major as well as the following courses for certification must be completed - CD 310, CD 322, CD 330, CD 393; EN 323, and EN 440; PY 224, PY 226, PY 327*)
- CD 496 Clinical Practicum I: Communication Disorders (6 crs.)**
Clinical experience in speech pathology or audiology. Clinical hours obtained can be credited toward required A.S.H.A. hours. Placements are varied and include hospital clinics, community health agencies and public schools. Application must be made by March 15 of the junior year. (*Prerequisite: 2.5 cum in the major and consent of the Department*)
- CD 497 Clinical Practicum II: Communication Disorders (6 crs.)**
The second semester of Practicum - clinical experience in speech pathology satisfying the 300 clock hour requirement for state certification as a teacher of children with speech, language and hearing disorders. (Clinical hours in some categories can also be credited toward 150 undergraduate hours for A.S.H.A.). Clinical Practicum I is only offered in the Fall semester and Clinical Practicum II is only offered in the Spring semester. (*Prerequisite: CD 456, 495, 496 and consent of the Department; CD 496 must be completed with a B or better; QPA of 2.5 in Communication Disorders courses*)
- CD 499 Directed Study in Communication Disorders (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- CD 520 Pediatric Audiology (3 crs.)**
Assessment and clinical management of children with hearing disorders. Etiological factors; problems of screening and differential diagnosis, conditioning and electrophysiological methods. (*Prerequisite: CD 310, CD 322, CD 340, CD 493*)

Speech Communication, Theatre Arts & Communication Disorders

- CD 590 Nonverbal and Augmentative Communication Systems (3 crs.)**
The course will address theoretical and pragmatic issues in client assessment, augmentative system selection and therapy procedures for implementation. A variety of nonverbal and augmentative communication systems will be reviewed including manual and computer assisted orthographic, word unit and compound systems. *(Prerequisite:*
- CD 591 Acoustic Phonetics (3 crs.)**
A study of the process by which sound is generated and modified by the speech mechanism with emphasis on acoustic methods of measurement, mechanical analysis and interpretation. *(Prerequisite: CD 291)*
- CD 593 Cleft Palate and Orofacial Anomalies (3 crs.)**
Embryology, etiology, diagnostic and intervention considerations in cleft lip and palate as well as associated oro-facial anomalies. *(Prerequisite: CD 591 or consent of the Instructor)*
- CD 595 Advanced Assessment and Interpretation of Communication Disorders (3 crs.)**
Advanced diagnostic procedures appropriate to neurophysiological, and psychologically-based disorders of communication. *(Prerequisite: CD 456, CD 496, CD 497)*
- CD 596 Graduate Clinical Practicum I (1-6 crs.)**
Advanced practicum in clinical settings with a focus on communication disorders in children and adults. *(Prerequisite: CD 496, CD 497)*
- CD 597 Graduate Clinical Practicum II (1-6 crs.)**
Advanced practicum in clinical settings with a focus on communication disorders in children and adults. *(Prerequisite: CD 596)*
- CD 599 Topical Studies in Communication Disorders (3 crs.)**
Variable topics, issues and contemporary research in Speech Pathology and Audiology. *(Prerequisite: Consent of the Instructor)*



Speech and Hearing Clinic

Speech Communication, Theatre Arts & Communication Disorders

THEATRE ARTS

A student majoring in Theatre Arts will be required to complete 4 semester hours of Practicum (CT 130 and CT 131) of which a minimum of 2 semester hours must be in CT 131.

- ‡CT 120 **Choral Speaking Practicum (1 cr.)**
Credit is given for sixty (60) or more hours of participation.
- ‡CT 130 **Theatre Performance Practicum (1 cr.)**
Credit is given for sixty (60) or more hours per semester of rehearsal and performance time in a major production.
- ‡CT 131 **Technical Theatre Practicum (1 cr.)**
Credit is given for 60 or more hours per semester of technical work on a major production. (Two of the required 4 credit hours must be earned in CT 131).
- ‡CT/PE 180 **Creative Dance Group* (1 cr.)**
Open to all students who enjoy composing and performing dances. Several programs are given each year. One three-hour meeting each week, plus additional periods of performance time.
- CT/PE 226 **Creative Dance I* (3 crs.)**
The study of dance as the Art of Movement. Included are basic exercise, individual and group dance based on polarities of force, impulse, time, space, vocal and instrumental sound.
- CT 250 **Play Production (3 crs.)**
Reading, selection, analysis, and preparation of scripts for presentation. Theory and practice.
- CT 270 **Community Theatre (3 crs.)**
Trends, organization, and practices of local and regional theatrical groups.
- CT 271 **Stage Make-up (1 cr.)**
Study and practice in the art of straight and character make-up for stage, television, and film. Two contact hours per week twice weekly.
- CT 272 **Stage Costuming (1 cr.)**
A study of period fashions and principles of costume design. Two contact hours per week twice weekly. Offered in alternate years.
- CT 290 **Movement and Dance for Actors (3 crs.)**
The exploration of Force, the dramatic element of movement in Dance and Drama. Dance in relation to the spatial environment, lighting, vocal and instrumental sound, costuming and masks.
- CT 310 **Oral Interpretation (3 crs.)**
Oral reading of selected prose, poetry and drama: individual and group forms. Theory and practice.
(Prerequisite: CC 210)
- CT 320 **Creative Dance for Children (3 crs.)**
The study and experience of Dance as a creative art activity for children. For those planning to work with children in schools, camps, community centers, or enrichment programs. (Prerequisite: One three credit dance course or consent of the Instructor)

‡Note: From the one-credit co-curricular activities, CC 110, CT 120, CT 130, CT 131, and CT/PE 180, and from any and all co-curricular activities for which the college grants credit, a student may accumulate not more than one credit per semester (two per year) nor more than six per four-year degree program.

*Offered for credit for both the Speech Communication, Theatre Arts and Communication Disorders and the Health, Physical Education and Recreation Departments.

Speech Communication, Theatre Arts & Communication Disorders

- CT/PE 325 Creative Dance II* (3 crs.)**
Study of impulse, design, metric patterns, dynamic qualities of dance, accompaniment and elements of performance through improvisation and composition. Emphasis will be on increased artistry in the development and presentation of individual and group dances. (*Prerequisite: One 3 credit dance course or consent of the Instructor*)
- CT 328 Movement in the Creative Arts* (3 crs.)**
Dance, the art of movement, in its relationship to drama, music, speech, and the visual arts. Creative experiences in each of these areas directed by divisional staff.
- CT 330 Creative Dramatics (3 crs.)**
Development of the child's creative faculties through the use of dramatic play in laboratory sessions as well as classroom activity.
- CT 336 The American Musical Theatre (3 crs.)**
Major trends in the evolution of the American Musical Theatre from its origin to the contemporary Broadway musical. Examination of major works of leading composers, librettists, performers, producers, and choreographers.
- CT/PE 352 Dance History* (3 crs.)**
Examination of dance from an historical perspective: movement, themes, composition, and accompaniment as expressive of specific cultures with emphasis on the western world. Recreation of individual and group dances from selected historical periods.
- CT 373 Theatre Management (3 crs.)**
Study of the commercial aspects of theatrical production: publicity, programs, financing, ticket sales and house management. (*Prerequisite: CT 250*)
- CT 375 Scene Design (3 crs.)**
Theory and practice of designing for stage productions. (*Prerequisite: CT 250*)
- CT 380 Stagecraft (3 crs.)**
Theory and practice of technical theatre with emphasis on planning the production. Study and practice in stage management, set construction, costuming, properties, make-up, and sound. (*Prerequisite: CT 250*)
- CT 385 Stage Lighting (3 crs.)**
Materials and techniques fundamental to contemporary stage lighting; analysis of the principles of design as they relate to contemporary theatre production.
- CT 390 Principles of Acting (3 crs.)**
Development of appreciation and basic skills in the fundamentals of acting. Exercises, improvisations, and scenes. (*Prerequisite: CT 250*)
- CT 391 Advanced Acting (3 crs.)**
Advanced problems and projects; intensive scene analysis and introduction to styles of acting. (*Prerequisite: CT 250, CT 390 or consent of the Instructor*)
- CT 392 Improvisational Acting (3 crs.)**
Development of the student's capabilities in interpreting his awareness of life through concentration, imagination, and observation.
- CT 395 Principles of Directing (3 crs.)**
Basic knowledge and techniques for the beginning director. Play analysis, composition, movement, characterization and rehearsal. (*Prerequisite: CT 250, CT 390 or consent of the Instructor*)

*Offered for credit for both the Speech Communication, Theatre Arts, and Communication Disorders and the Health, Physical Education and Recreation Departments.

Speech Communication, Theatre Arts & Communication Disorders

- CT 399 Topical Studies (3 crs.)**
Variable contemporary topics in theatre.
- CT 410 Modern Styles of Theatrical Production (3 crs.)**
Analysis and practice of staging methods and styles of selected modern movements which are considered classic in the development of theatre, such as: styles appropriate to the works of Brecht, Strindberg, Beckett, and Ionesco. (*Prerequisite: CT 250, CT 390, or consent of the Instructor*)
- CT 415 Comedy on Stage (3 crs.)**
Analysis and practice of theatrical comedy, including techniques appropriate to the interpretation and presentation of humorous dramatic scenes in the classroom. (*Prerequisite: CT 250, CT 390 or consent of the Instructor*)
- CT 420 Children's Theatre (3 crs.)**
Theatre for the child audience. Theories applied by assuming responsibility for the production of a play for children on campus and in area schools. (*Prerequisite: CT 250*)
- CT 431 Theatre History I (3 crs.)**
Trends in dramatic and theatrical developments throughout the western world from Ancient Greece to the 17th century. Not open to Freshmen except by special permission of the Department.
- CT 432 Theatre History II (3 crs.)**
Trends in dramatic and theatrical developments throughout the western world from the 17th century to the present. Not open to Freshmen except by special permission of the Department.
- CT 435 Period Styles of Theatrical Production (3 crs.)**
Analysis and practice of the staging methods and styles of selected historical periods which are considered classic in the development of theatre, such as: styles appropriate to the works of Sophocles, Plautus, Shakespeare, and Moliere. (*Prerequisite: CT 390 or CT 395 or consent of the Instructor*)
- CT 470 Playwriting (3 crs.)**
Appreciation of the nature of the play as an art form. Analysis of plays of various types. Practice in writing.
- CT 498 Internship in Theatre (3-15 crs.)**
A non-classroom experience designed for a limited number of junior and senior majors to complement their academic preparation. (*Prerequisite: Consent of the Department Chairperson*)
- CT 499 Directed Study in Theatre (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: consent of the Department*)
- CT 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- CT 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

Division of Natural Sciences and Mathematics

Biological Sciences,
Chemical Sciences,
Earth Sciences & Geography,
Management Science & Aviation Science,
Mathematics & Computer Science,
Physics

UNDERGRADUATE PROGRAMS

The departments of the Division of Natural Sciences and Mathematics offer undergraduate majors in aviation science, biology, chemistry, professional chemistry, chemistry/geology, earth sciences, geography, management science, mathematics, computer science, and physics.

Undergraduate minors have been developed in aviation science, biology, chemistry, computer science, data processing, earth sciences, geography, geo-physics, management science, mathematics, physical science, physics, and urban affairs. There are also pre-dental, pre-medical, pre-veterinary, oceanography, and scientific illustration programs. Some majors, minors, and programs are of an interdisciplinary nature.

Undergraduate majors and minors are described under the department listings. Additional programs offered by the several departments of the Division are described in the section of this catalogue entitled *Undergraduate Multidisciplinary and Pre-Professional Programs*.

A variety of undergraduate course offerings may be taken by students who neither major nor minor in the academic areas indicated above. These courses may be taken either as free electives or to fulfill the general education requirements of the College.

Working closely with their academic advisors, students may plan programs of study which prepare them for graduate school or for immediate entry into the job market. Those who anticipate teaching any of the natural sciences or mathematics should plan part of their academic program in Professional Education. Information on this matter may be found under the appropriate department of this Division as well as under the Department of High School, Middle School, and Adult Education.

GRADUATE PROGRAMS

The departments of the Division offer programs leading to the degrees of Master of Arts in Biology and Chemistry and Master of Arts in Teaching in Biology, Chemistry, Earth Sciences, Geography, Mathematics, Physical Sciences, and Physics. In addition, the Division offers a program leading to the Certificate of Advanced Graduate Study (CAGS) in Natural Sciences and Mathematics. Specific information about these programs may be found below, as well as under the departments of the Division, and in the section of this catalogue entitled *The Graduate School*.

Natural Sciences & Mathematics

CERTIFICATE OF ADVANCED GRADUATE STUDY (CAGS) IN NATURAL SCIENCES & MATHEMATICS

The Division offers a program leading to a Certificate of Advanced Graduate Study (CAGS) in Natural Sciences and Mathematics. This program is designed to meet the varied career needs of professionals who have earned an appropriate master's degree and who wish to attain greater competency in a combination of areas of study in the field of natural sciences and mathematics. Areas of study include biology, chemistry, earth sciences, geography, mathematics, physical sciences, and physics. Ordinarily, the applicant's master's degree must be in an area within the field of natural sciences and mathematics. Applicants must demonstrate that they possess an academic and experiential background relevant to their field, and must indicate that their needs and goals are in accord with the objectives of the CAGS.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of the catalogue. Each student's CAGS program must include the Division's CAGS Seminar in Natural Sciences and Mathematics (NS 599), which is designed to provide a broad conceptualization of the field, as well as to focus the student's course of study on critical issues facing professionals in the field today. Remaining credit requirements will be fulfilled by courses selected under the direction of the advisor which clearly meet the student's academic and career needs.

Additional information regarding this program, including application procedures and general academic requirements, may be found in the Graduate School section of the catalogue.

DIVISIONAL COURSE OFFERINGS

- NS 300 Science and the Impact of Technology (3 crs.)**
A study of the interplay of science and technology, the environmental, social, and economic consequences of technology, the effect of technical change on society, the management and control of technology, and the nature of the technological decision-making process. May be used to fulfill Group VI GER Elective only.
- NS 400 Senior Interdisciplinary Seminar in Environmental Science (3 crs.)**
Current environmental issues will be discussed and analyzed in detail from an interdisciplinary viewpoint. The importance of thorough analysis and planning in developing long-term solutions to environmental problems will be emphasized. Faculty with appropriate interdisciplinary backgrounds will participate. (*Prerequisite: An introductory course in environmental science or permission of the Instructors*)
- NS 411 Introduction to Medicine for the Non-physician (3 crs.)**
A survey of human medicine. Topics selected from anatomy, physiology, medical embryology, radiology, physical diagnosis, laboratory medicine, pathology, treatment of disease, and disease prevention. (*Prerequisite: BI 102 (or equivalent) and a semester of a college-level course in chemistry or physics, or consent of the Instructor*)
- NS 599 CAGS Seminar in Natural Sciences and Mathematics (3 crs.)**
Designed to provide a broad conceptualization of the field, focusing on critical issues facing professionals in science and mathematics today.

Department of Biological Sciences

Chairperson: Professor James Brennan
Professors: Walter Hewitson, Kenneth J. Howe,
John Jahoda, Lawrence Mish, Walter Morin,
Florian Muckenthaler, William Wall
Associate Professors: Hardy Moore, Diane Peabody

The Department offers an undergraduate program leading to the degree of Bachelor of Arts or Bachelor of Science and a graduate program leading to the degree of Master of Arts or Master of Arts in Teaching. The goal of the undergraduate program is to provide students with broad backgrounds allowing for flexibility in making career choices. Students enrolled in the graduate program have the opportunity to develop their skills and knowledge in more specialized areas.

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS/BACHELOR OF SCIENCE

A broad background is promoted by a core of 27 (24) credits from the biological, botanical and zoological disciplines along with 18 credits from chemistry, mathematics and physics. Specifically, the following courses or their equivalents (as determined by the department) must be completed:

BI 100, BI 104 (may be omitted by students who earned a grade of A in BI 100), BI 240, BI 282 or BI 284, BI 321, BI 341, BI 373, BI 425 and BI 428. CH 131-132, a one-semester course in mathematics (MA 103 is recommended) followed by a one-semester course in calculus (MA 104 is recommended) or statistics or computer science, and PH 181-182.

The above courses and credits are required of Biology Majors who are minoring in High School Education or who have a second major with another academic department. Second majors especially appropriate to biologists today which would enhance employment opportunities are Chemistry, Computer Science and Physics, but a student might choose any other major approved by the College.

Students who are not minoring in High School Education or who have not officially declared a second major must complete the following additional requirements:

Three biology elective courses (four biology elective courses if the student is not required to take BI 104).

One year of a foreign language or CH 343-344 Organic Chemistry or CH 300 Organic Chemistry for Life Sciences plus BI 320 Biochemistry.

The purpose of the three (four) biology electives is to provide the student with the opportunity to complement the broad background obtained in the biological sciences with further training in an area of individual student interest. Normally, students should try to take the required courses in biology, chemistry, mathematics and physics in the following sequence:

Freshman: 1st Semester — BI 100, CH 131, MA 103; 2nd Semester — BI 104 (if required), CH 132, MA 104 or statistics or computer science.

Sophomore: 1st Semester — BI 240, PH 181; 2nd Semester — BI 282 or BI 284, PH 182.

Junior: 1st Semester — BI 321, BI 341; foreign language or CH 343 or CH 300; 2nd Semester — BI 373; foreign language or CH 344 or BI 320.

Senior: 1st Semester — BI 425; 2nd Semester — BI 428 (Students minoring in Secondary Education should take BI 428 2nd Semester of the junior year and ED 490 during the 2nd Semester of the senior year).

Biological Sciences

Upon completion of the General Education Requirements for the College and the requirements for a major in the biological sciences, a student is left with a number of free elective courses to take, bringing the total number of credits earned to the 120 required for graduation. These free elective courses might be used most effectively to gain further knowledge and training in the biological sciences or cognate areas, to complete a minor in a discipline other than biology or to participate in one of the Multidisciplinary Programs (see catalogue section, Undergraduate Multidisciplinary and Pre-Professional Programs).

The following courses do not fulfill any of the requirements for the Biology Major: BI 110, BI 112, BI 115, BI 121, BI 171, BI 172, BI 210, BI 214, BI 216, BI 217, BI 224, BI 280 and BI 311.

Each student majoring in Biology will be assigned an advisor from among the faculty of the department. Students should consult with their advisors frequently to receive academic counseling and to verify that they are completing the requirements for graduation.

STUDENTS WHO HAVE NOT DECLARED A MAJOR AND WHO BELIEVE THEY MIGHT SELECT A MAJOR IN THE BIOLOGICAL SCIENCES SHOULD CONSULT WITH THE DEPARTMENTAL CHAIRPERSON AS SOON AS POSSIBLE. SUCH STUDENTS ESPECIALLY NEED EARLY COUNSELING IF THEY WISH TO GRADUATE IN THE NORMAL FOUR YEAR PERIOD.

MINOR IN THE BIOLOGICAL SCIENCES

A minor consists of 18 credits in Biology. Students must take BI 100 or its equivalent and five additional courses planned in consultation with the departmental chairperson. Two types of minors can be designed by selecting from the wide variety of courses offered by the department.

Courses having laboratories which are normally taken by Biology Majors might be selected by those students planning to go to graduate schools in their major fields. This type of minor could provide the anatomical, physiological and hereditary background needed for a better understanding of such disciplines as Anthropology, Health and Physical Education, Psychology, Sociology and Communication Disorders, or it could strengthen the student's background for such merged disciplines as Biochemistry, Biophysics and Biometry. Earth Science Majors interested in historical geology might find structural and taxonomic courses in botany and zoology of benefit when trying to interpret the fossil record. Several courses could be appropriate for Geography Majors interested in environmental problems.

This type of minor need not be selected merely to reinforce the student's major. It might be selected simply because a student enjoys a particular area of biology and wishes to take additional courses. For example, students interested in horticulture might take such courses as Landscaping, Horticulture, Plant Propagation, Plant Anatomy, Plant Physiology, Biology of The Fungi and Entomology.

The second type of minor can be thought of as a liberal arts minor which relates to and supports the major discipline. Many of the nonlaboratory courses offered by the department would be appropriate to this type of minor. For example, a Philosophy Major interested in the philosophy of science could take one or more laboratory courses in biology for exposure to scientific methodology and the following nonlaboratory courses: The Biological Environment, Topics in Animal Behavior, Genetics and Human Endeavor, Biology and Human Thought, Microbiology and Man. These nonlaboratory courses would provide the Philosophy Major with historical perspective and an introduction to the major biological issues confronting the human species today. Such a minor could be appropriate to other disciplines as well.

GRADUATE PROGRAMS

MASTER OF ARTS

The Department offers a program leading to the degree of Master of Arts in Biology, which is designed to prepare qualified students for research, further graduate study and teaching.

All applicants for the degree must be interviewed by the Chairperson of the Department for the purpose of assessing the student's background and determining research interests. If the applicant does not possess an adequate background, he or she may be required to correct deficiencies by enrolling in undergraduate courses without applying credit from those courses towards the graduate program requirements. The Chairperson shall also arrange for meetings with faculty who are likely to be involved in directing research and preparation of the thesis.

Biological Sciences

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. In addition to meeting general degree requirements, the student must complete a minimum of thirty appropriate graduate credits in the biological sciences. All courses taken by the graduate student must have the approval of the faculty advisor. During the first semester of graduate work an oral preliminary examination will be given to aid the faculty advisor in planning the student's program of study.

A demonstrated reading knowledge with the use of a dictionary of one foreign language is required for the M.A. Degree. The language examination will be given in the Department of Biological Sciences, Conant Science Building, the second Friday in December and the second Friday in May of each academic year. No more than two hours will be allowed for the examination which will be evaluated by a member of the language department. The request for an examination must be made to the student's advisor at least two weeks preceding the date of the examination. Students may not register for courses beyond 12 credits until the language examination has been passed. No more than three attempts to satisfy the language requirement will be permitted.

Each student will be expected to participate in original research (up to nine of the thirty credits) under the direction of a faculty member and to prepare a thesis based upon the research. A student is required to register for BI 502 during any term that College facilities are being utilized or faculty supervision is required by the student to conduct research. Research opportunities are available within certain areas of the following general fields:

Animal Behavior	Entomology	Marine Biology	Plant Anatomy
Animal Physiology	Evolution	Microbiology	Plant Morphology
Biochemistry	Field Biology	Mycology	Plant Physiology
Cytology	Genetics	Neurophysiology	Plant Taxonomy
Developmental Biology	Invertebrate Zoology	Ornithology	Ultrastructural Studies
Ecology			

The following courses may not be taken for graduate credit in the M.A. program: any course with a 100 number, BI 210, BI 211, BI 212, BI 214, BI 215, BI 216, BI 217, BI 224, BI 242, BI 270, BI 272 and BI 311.

MASTER OF ARTS IN TEACHING

The Department offers a program leading to the degree of Master of Arts in Teaching, which is designed primarily for in-service teachers, as well as for students seeking a foundation for further graduate work. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Students enrolled in the program must meet the general requirements for the degree (including 12 hours of course work selected from the four areas of professional study in education — consult the Graduate School section of this catalogue), plus the departmental requirements (a minimum of 18 semester hours of courses in the biological sciences).

Six of the 18 hours in the biological sciences must be from the field of botany and six from the field of zoology. The remaining six hours might be used for a thesis, for directed study, or course work in any of the biological areas. In addition, a student must have taken a course in genetics either at the undergraduate or graduate level and must take at least one of the courses listed under each of the following general areas:

Morphology and Systematics: BI 240, BI 273, BI 282, BI 284, BI 344, BI 422, BI 428, BI 475, BI 542, BI 544, BI 546, BI 576.

Physiology: BI 320, BI 341, BI 373, BI 481, BI 526, BI 571, BI 572

Field and Behavioral Biology: BI 221, BI 272, BI 275, BI 315, BI 326, BI 425, BI 473, BI 537, BI 581, BI 583, BI 585

Cellular Biology: BI 324, BI 371, BI 430, BI 433, BI 434, BI 520

The following courses may not be taken for graduate credit in the M.A.T. program: any course with a 100 number, BI 210, BI 211, BI 214, BI 224.

Biological Sciences

COURSE OFFERINGS*

- BI 100 General Principles of Biology (3 crs.)**
A study of biological principles at the cellular and organismal levels, including such topics as cell structure and function, respiration, photosynthesis, cell reproduction, DNA and protein synthesis, genetics, ecology and evolution. Two lectures and one two-hour laboratory period weekly.
- BI 102 Introduction to Zoology (3 crs.)**
The zoological aspects of biology with emphasis on such topics as: the nature of sciences and scientific thinking; the structure and physiology of cells, tissues, organs, and organ-systems; embryogeny; heredity; ecological and phylogenetic interrelationships; a general survey of the animal kingdom. Two lectures and one two-hour laboratory period weekly.
- BI 104 Applied Principles of Biology (3 crs.)**
A survey of the biological kingdoms with emphasis on general principles of biology as they relate to the different groups of organisms. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100 or consent of the Instructor*)
- BI 110 Man and Nature (3 crs.)**
A course that includes consideration of humans and their role in the natural world. The structure and function of the different systems of a human being as a member of the animal kingdom will be taken up. Other topics covered will include a basis for understanding human reproduction and heredity, the human's role in the pattern of evolution and human interaction with the rest of the living and nonliving world. Students may not submit both BI 102 and BI 110 to fulfill the general education requirements in science. Three one-hour lectures weekly.
- BI 112 Biology and Human Thought (3 crs.)**
The science of living organisms in relation to the cultural development of humans. The sources of modern biology, concepts of evolution, and levels of biological organization are included. Primarily for non-science majors. Three lectures weekly.
- BI 114 Basic Horticulture (3 crs.)**
A study of the interactions between plant structure, function and environmental factors as they relate to the growth and propagation of cultivated plants. Three lectures weekly.
- BI 115 Microbiology and Man (3 crs.)**
A course designed to introduce the topic of microorganisms in the environment and man's interaction with them. The course covers milestones in the early study of microorganisms, the microorganisms themselves (bacteria, fungi, algae, protozoa, viruses) and basic techniques used in studying them. In addition, microorganisms will be studied as active members of the environment, as causal agents of disease, as important participants in industry, and as model systems for the study of certain biological principles. Three lectures weekly.
- BI 121 Conservation and Natural Resources (3 crs.)**
A course stressing the importance of conservation of natural resources, especially water, and the role of plants and animals in the maintenance and replenishment of our natural heritage. Lectures, guest speakers, readings, and field trips to good and bad examples of conservation practice will form an important segment of the course. The course is designed as an exposition of the conservation problems of Southeastern Massachusetts and will be aimed at teachers of junior and senior high school biology and general science, city and town officials concerned with water, sewage, forestry, conservation, and industrial development and planning. One two-hour lecture and one three-hour laboratory period weekly.
- BI 171 Human Anatomy and Physiology I (4 crs.)**
Principles of cellular and general physiology; cell, tissue and organs structure; structure and function of the skeletal, muscular and nervous systems. Three one-hour lectures and one two-hour laboratory period weekly.

*See page 68 for general information regarding course offerings

Biological Sciences

- BI 172 Human Anatomy and Physiology II (4 crs.)**
The structure and function of the circulatory, excretory, digestive, respiratory and endocrine systems. Intermediary metabolism and reproduction will also be discussed. Three one-hour lectures and one two-hour laboratory period weekly.
- BI 210 The Biological Environment (3 crs.)**
A course emphasizing current and future problems associated with man in his environment. The biological relationship between man and other living forms is discussed in terms of man's historical and present role in nature. Topics to be covered include: basic ecological principles, various aspects of pollution, population, and environmental disturbances. Three lectures weekly.
- BI 211 Landscaping (3 crs.)**
A course designed to introduce the principles behind formal, informal and naturalistic landscaping practices. Emphasis will be divided equally among three major areas, identifying-selecting, planting-maintaining and designing-arranging of plant materials in the landscape with a goal of improving the aesthetic and functional values of the landscape. Three lectures weekly.
- BI 212 Plant Propagation (3 crs.)**
A course designed to introduce the principles and practices of propagating plants. Techniques of cuttage, grafting, budding, layering and propagation by seed will be emphasized. Three lectures weekly.
- BI 213 Trees and Shrubs (3 crs.)**
The identification and classification of woody plants native and introduced to the local area. Students will be exposed to lectures, demonstrations of proper collecting and preserving techniques, keying and some short local field trips. Three one-hour periods weekly.
- BI 214 CPR Instructor's Course (1 cr.)**
A course designed to certify persons as instructors of CPR according to the standards of the American Heart Association. Students will become familiar with the anatomy and physiology of the cardiopulmonary system, risk factors, symptoms, one and two-person rescue of an adult, one-person rescue of an infant and child, and opening the obstructed airway. Students in pairs will be responsible for obtaining eight students and teaching those students a rescuer's course in CPR. Three hours per week for one quarter.
- BI 215 Drugs of Plant Origin (3 crs.)**
The formation, identity, and specific effects of plant materials that influence the course of human disease, discomfort and well-being. Three lectures weekly.
- BI 216 The Insect World (3 crs.)**
An introduction to the study of insects for the non-biology major. Emphasis is placed on the biology and recognition of the major groups of insects, as they relate to our general environment, food supply and health. Three lectures weekly.
- BI 217 Man, Insects and Disease (3 crs.)**
A survey of the insects and related organisms that cause medical problems throughout the world, and their effect on the health and welfare of human societies. Three lectures weekly.
- BI 218 Evolution (3 crs.)**
The theory of evolution and the supporting evidence. Three lectures weekly.
- BI 221 Field Natural History (3 crs.)**
The identification of local plants and animals with emphasis on the natural history of common plants and animals, dominant biotic communities of Southeastern Massachusetts, general morphology and taxonomy of organisms, and techniques of collecting and preserving. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100 (or equivalent) or consent of the Instructor*)
- BI 224 Introduction to Microbiology (4 crs.)**
A course designed to introduce the principles of microbiology to nurses. Emphasis will be placed on the characterization and cultivation of bacteria; reproduction, growth and metabolism of bacteria; microorganisms other than bacteria, i.e., protozoa, algae, fungi, viruses; control of microorganisms; microorganisms and disease. Three lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 171, CH 125 or equivalent*)

Biological Sciences

- BI 240 Plant Morphology (3 crs.)**
A survey of the plant kingdom from the Monera through the angiosperms with emphasis on evolutionary adaptations associated with each group and phylogenetic relationships between the divisions as reflected in present day classification systems. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100 or equivalent or consent of the Instructor*)
- BI 241 Plant Anatomy (3 crs.)**
A comparative study of the structural, functional, developmental and phylogenetic characteristics of cells, tissues, and organs in the vascular plants with emphasis on the angiosperms. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100 or equivalent or consent of the Instructor*)
- BI 242 Plants and Man (3 crs.)**
A study of the value of plants to mankind; special emphasis given to plants used as foods, fibers, lumber, fuel, clothing, medicine, poison, beverages, dyes and condiments. Three lectures weekly. (*Prerequisite: BI 100 or equivalent*)
- BI 270 Biological Foundations of Normal and Therapeutic Nutrition (3 crs.)**
An introduction to the theory and application of nutritional principles. Topics include: identity, physiological functions, sources, and preservation of nutrients required by the human. Diet-generated disorders and the use of diet in disease treatment are also discussed. Three lectures weekly. (*Prerequisite: BI 172 (may be taken concurrently), CH 125 (or equivalent), or consent of the Instructor*)
- BI 272 Topics in Animal Behavior (3 crs.)**
An introduction to the study of the behavior of animals. This lecture and discussion course will cover major topics of animal behavior, including conflict behavior, display and ritualized behavior, drives, motivation, stimuli, reflexes, animal communication, learning, social behavior, migration and biological rhythms. Emphasis will be given where applicable to the relationship of animal behavior to human behavior. Three lectures weekly.
- BI 273 Vertebrate Zoology (3 crs.)**
A taxonomic and evolutionary analysis of the functional morphology, systematics, behavior and evolution of the major vertebrate classes. Principal emphasis on taxonomy, systematics and concepts of zoogeography. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100 or equivalent, or consent of the Instructor*)
- BI 275 Ornithology (3 crs.)**
Basic structure, life history, migration, and identification of local birds. Two lectures and one two-hour laboratory period weekly. Early morning and weekend field trips. (*Prerequisite: BI 100 or equivalent, or consent of the Instructor*)
- BI 280 Human Physiology (3 crs.)**
General physiological principles and their application to the human body. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 102 or consent of the Instructor*)
- BI 282 Comparative Chordate Anatomy (3 crs.)**
An ontogenetic and phylogenetic survey of chordate gross anatomy, supplemented by laboratory dissections of representative species. Emphasis is placed on ecomorphology and the changes in chordate structure and biology that comprise their evolution, with an analysis of the significance of these changes in light of our modern knowledge of evolution. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100 or equivalent, or consent of the Instructor*)
- BI 284 Invertebrate Zoology (3 crs.)**
The biology of invertebrates from a phylogenetic standpoint with emphasis on taxonomy, morphology, physiology, development, and natural history. Representatives of the principal classes of each phylum are studied. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100 or equivalent, or consent of the Instructor*)
- BI 290 Introduction to Pharmacology (3 crs.)**
Introduction to the basic concepts in pharmacology which are important for the understanding of the interaction between chemical agents and the human organism. Types and frequencies of adverse reactions will be reviewed. Specific classes of drugs will be reviewed. Specific classes of drugs will be examined including CNS, cardiovascular, and antimicrobial agents acting on the autonomic nervous system and hormones. Examples of the use of these basic concepts and the application of specific agents in the treatment of disease will be taken from the literature. (*Prerequisite: BI 280 or BI 171*)

Biological Sciences

- BI 311 Heredity and Human Endeavor (3 crs.)**
The principles of genetics which are important to an understanding of the hereditary mechanism in humans. Individual differences in relation to gene-environment interaction and the role of heredity in education, governance, and society. Primarily an elective for non-science majors. Three lectures weekly. (*Prerequisite: BI 100 or equivalent, or consent of the Instructor*)
- BI 312 Plant Pests and Diseases (3 crs.)**
A survey of pests and diseases which attack indoor and outdoor plants. The biology of the organisms, principles involved in their growth and development, interaction with other organisms and the environment, and the application of control measures are studied. Three lectures weekly. (*Prerequisite: one course which includes the structure and function of plants, or consent of the Instructor*)
- BI 313 Techniques of Interpretation for the Naturalist (3 crs.)**
Techniques of presentation of information concerning our natural heritage through public parks and preserves. The prudent use of public park land as camp grounds, recreation areas, natural study sites, and interpretive facilities will be discussed. Meaningful participation in planning and presentation of campfire talks, guided walks, and interpretive displays are an important feature of the course. The techniques utilized are appropriate to students preparing for careers involving interpretation of scientific phenomena in parks, forests, or museums. Also useful to students majoring in educational, historical, anthropological or archeological curricular. One lecture and one three-hour lecture demonstration weekly. (*Prerequisite: At least junior standing, or consent of the Instructor*)
- BI 315 Seminar on Human Sexual Reproduction (3 crs.)**
Sperm and egg production; fertilization; embryology of fetus; development and physiology of fetus; hormones in reproduction (sexual cycles, pregnancy and lactation); sexual behavior and artificial controls of reproduction. Three lectures weekly. (*Prerequisite: BI 100 or equivalent or consent of the Instructor*)
- BI 320 Biochemistry (3 crs.)**
A study of the functions, chemical transformations, and attendance energy changes associated with basic biological phenomena. Three lectures weekly. (*Prerequisite: BI 100; BI 104 or BI 240; CH 131-132; one semester college level mathematics or equivalent; or consent of the Instructor*)
- BI 321 Genetics (3 crs.)**
Analysis of the basic principles underlying heredity and the mechanisms involved in the replication, recombination, mutation, variation and expression of genetic material in representative plant, animal and microbial systems. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100; BI 104 or BI 240; CH 131-132; MA 103-104 or equivalent; or consent of the Instructor*)
- BI 324 Microscopical Technique (3 crs.)**
A consideration of the use of the light microscope in studying biological materials. The course includes study of different uses of the light microscope and preparation of cells and tissues for examination with the light microscope. Preparation of whole mounts, sections, and introduction to histochemistry will be included in the laboratory. One lecture and two two-hour laboratory periods weekly. (*Prerequisite: BI 100; BI 104 or BI 240; CH 131-132 or equivalent; or consent of the Instructor*)
- BI 326 Marine Biology (3 crs.)**
An introduction to the marine ecosystems with emphasis on factors involved in the growth, diversity, and distribution of populations occupying the marine habitats of the Eastern Atlantic coast. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100 or equivalent, or consent of the Instructor*)
- BI 341 Plant Physiology (3 crs.)**
The growth and function of plants including cellular physiology, water relations, metabolism, respiration, photosynthesis, nutrition, growth regulation, and the influence of environment. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100; BI 104 or BI 240; CH 131-132 or equivalent; or consent of the Instructor*)
- BI 344 Biology of the Fungi (3 crs.)**
An introduction to the morphology, taxonomy, and physiology of the fungi. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100; BI 104 or BI 240; CH 131-132 or equivalent; or consent of the Instructor*)

Biological Sciences

- BI 371 Histology (3 crs.)**
A study of the microscopic anatomy of mammalian tissue and organs with emphasis on human materials. The study of prepared slides in the laboratory will serve as a basis for discussion of the interdependence of structure and function in the animal body. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100; BI 282 or BI 284; CH 131-132 or equivalent; or consent of the Instructor*)
- BI 373 Animal Physiology (3 crs.)**
Physiological principles concerned in irritability, contraction, circulation, gas exchange, excretion, and hormonal regulation. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100; CH 131-132 or equivalent; or consent of the Instructor*)
- BI 375 Immunology (3 crs.)**
The immune system and its components, including their structure, function, genetics and ontogeny. Three lectures weekly. (*Prerequisite: BI 321; BI 172 or BI 280 or BI 371 or BI 373*)
- BI 421 Seminar in Biology (1 cr.)**
In-depth consideration of current problems and research in the biological sciences. (*Prerequisite: Consent of the Instructor*)
- BI 422 Biological Evolution (2 crs.)**
The theory of evolution and the operation of evolutionary forces as related to modern taxonomy, with emphasis on such topics as mutation, variation, hybridization, polyploidy, isolation, natural selection, and population genetics. Two lectures weekly. (*Prerequisite: BI 321 or consent of the Instructor*)
- BI 425 Ecology (3 crs.)**
The dynamics and evolution of populations, communities, and eco-systems. Students become acquainted with the communities of Southeastern Massachusetts through field studies. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 321; BI 341 or consent of the Instructor*)
- BI 428 Microbiology (3 crs.)**
An introduction to the structure, function, and ecology of microorganisms with emphasis on bacteria and viruses. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100; BI 104 or BI 240; BI 341; CH 131-132 or equivalent; or consent of the Instructor*)
- BI 430 Developmental Biology (3 crs.)**
A study of developmental processes at different levels of organization with emphasis on animal development. Topics include gametogenesis, fertilization, early embryonic development, organogenesis, differentiation, growth and regeneration. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100; BI 282 or BI 284; CH 131-132 or equivalent; or consent of the Instructor*)
- BI 433 Cytology (3 crs.)**
Cellular morphology and organization including descriptions of major intracellular processes and the functional significance of cellular structures. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100; BI 104 or BI 240 or equivalents; or consent of the Instructor*)
- BI 434 Biological Electron Microscopy (3 crs.)**
An introduction to the techniques of tissue preparation including fixation, dehydration and embedment procedures, followed by sectioning and staining, practical use of the electron microscope and interpretation of electron photomicrographs. Basic principles of tissue preparation and applications of electron microscopy will be stressed. One lecture and one three-hour laboratory period weekly. (*Prerequisite: BI 433 or consent of the Instructor*)
- BI 435 Problem Solving with the Computer in Biology (3 crs.)**
The solution of mathematical problems in various areas of biology with the computer. Identification and analysis of problems followed by algorithm construction and preparation of effective computer programs. An introduction to significant problem solving with computer in areas such as genetics, population biology, microbiology, and physiology. Three lectures weekly. (*Prerequisite: At least junior standing with 15 credits in biology courses. CS 100 or CS 101 - students will be required to write computer programs in either BASIC or PASCAL*)

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- BI 472 Human Genetics (3 crs.)**
The general principles of genetics as applied to humans. Emphasis will be placed on the determination of genotypes, predictions for future offspring, pedigree construction and analysis, diagnosis and treatment of genetic diseases, gene mapping, cytogenetics of normal and aberrant genomes, and population genetics. (*Prerequisite: BI 321*)
- BI 473 General Entomology (3 crs.)**
A study of the biology and control of insects with emphasis on the taxonomy of the orders and major families. Formation of an identified insect collection is included. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100 or equivalent or consent of the Instructor*)
- BI 475 Parasitology (3 crs.)**
The biology of animal parasites and their vectors with emphasis on morphology, physiology, development, taxonomy, and distribution. Representatives of the principal groups of parasites are studied in the laboratory. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 100 or equivalent or consent of the Instructor*)
- BI 481 Sensory Physiology (3 crs.)**
Discussion of the structure and function of human sensory receptors; vision, hearing, touch, smell, taste; muscle receptors and autonomic receptors. Three lectures weekly. (*Prerequisite: BI 100, BI 373 or equivalent, or consent of the Instructor*)
- BI 498 Internship in Biology (3-15 crs.)**
Internships include research, laboratory or occupational experience in industrial, allied health, educational, medical, governmental, recreational, regulatory or other organizations outside of the College. No more than six (6) credits may be used toward the biology major electives. (*Prerequisite: Consent of the Department*)
- BI 499 Directed Study in Biology (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- BI 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his/her field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- BI 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his/her field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- BI 504 Advanced Seminar in Selected Modern Biological Topics (3 crs.)**
A study of significant recent work in a specific area of biological research. Students will be expected to do considerable library research, make oral presentations, and present a satisfactory written summary of their work.
- BI 520 Developmental Genetics (3 crs.)**
An examination of current knowledge of the genetic basis of developmental processes. Mechanisms of expression of genetic information during the early stages of development will be discussed. Differential gene function as the basis of differentiation will be considered along with genetic control mechanisms, genetic interaction at different levels and regulation of gene function. Three lectures weekly. (*Prerequisite: BI 321, CH 131-132, or consent of the Instructor*)
- BI 526 Microbial Physiology (3 crs.)**
An advanced study of bacteria and fungi emphasizing their nutrition, growth, death, and chemical activities. Laboratory work will demonstrate some research methods of microbial physiology and illustrate some representative physiological systems. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 320, BI 321, BI 428, CH 344 or consent of the Instructor*)

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- BI 537 Intertidal Biology (3 crs.)**
A study of the dynamics of intertidal ecosystems with emphasis on factors involved in the similarity and diversity of occurrence and distribution of intertidal plants and animals. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: A course in Ecology or Marine Biology or consent of the Instructor*)
- BI 542 Comparative Morphology of the Vascular Plants (3 crs.)**
The vascular plants from the psilopsids to the angiosperms using classical and contemporary data for the evaluation of phylogenetic and phenetic relationships. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 240, BI 422 or consent of the Instructor*)
- BI 544 Experimental Morphology of Angiosperms (3 crs.)**
The growth and development of flowering plants as revealed by experimental modification of their environment, including an investigation of the basic molecular processes involved in genetic control of plant development and their interaction with hormonal mechanisms and environmental influences. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 240, BI 321, BI 341, one semester of college level mathematics, or consent of the Instructor*)
- BI 546 Taxonomy of Spermatophytes (3 crs.)**
A survey of the seed plants; their structures, taxonomy, phylogeny, and ecological importance. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 221, BI 240, or consent of the Instructor*)
- BI 571 Neurophysiology I (3 crs.)**
The physiology of the peripheral nervous systems, receptors, and muscles, considered in both vertebrates and invertebrates. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 373 or consent of the Instructor*)
- BI 572 Neurophysiology II (3 crs.)**
The central nervous system of invertebrates and vertebrates including anatomical, physiological, and biochemical aspects. When appropriate, some behavioral studies will be considered. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 373 or consent of the Instructor -- BI 571 need not precede BI 572*)
- BI 576 Advanced Entomology (3 crs.)**
The biology of insects including the immature stages. Topics include: morphology, physiology, development, taxonomy and ecology. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 473 or consent of the Instructor*)
- BI 581 Mammalogy (3 crs.)**
The classification, distribution, life histories, techniques of collection and preservation, ecology, and ethology of mammals. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 282 or BI 273 or consent of the Instructor*)
- BI 583 Comparative Ethology (3 crs.)**
Behavioral adaptations of animals to their environments and way of life. Introduction of the objective analysis of behavior patterns and use of patterns in clarifying evolutionary relationships. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 282, BI 373 or BI 280, or consent of the Instructor*)
- BI 585 Ichthyology (3 crs.)**
Classification, distribution, economic value, identification, life histories, management, morphology, ethology, ecology, and preservation of fishes. Two lectures and one two-hour laboratory period weekly. (*Prerequisite: BI 282 or BI 273 or consent of the Instructor*)

Department of Chemical Sciences

Chairperson: Professor Henry Daley, Jr.
Professors: Wilmon Chipman, Vahe Marganian
Associate Professor: Margaret Souza
Assistant Professor: Joseph Pagano

The Department of Chemical Sciences offers programs leading to the degrees of Bachelor of Arts in Chemistry, Bachelor of Science in Chemistry, Master of Arts in Chemistry and Master of Arts in Teaching Chemistry. All of these programs are designed to provide the skills and knowledge necessary to prepare students for successful careers in the chemical industry, chemical research, teaching, oceanography and environmental science, or for further study in graduate degree programs.

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS/BACHELOR OF SCIENCE

The department offers two major programs in Chemistry and also a Chemistry-Geology major jointly with the Department of Earth Sciences. The first major offered by the department, the major in Professional Chemistry, is designed for students who plan to go on to graduate work in chemistry or to do research in the chemical industry. The courses offered in this program meet the requirements of the American Chemical Society* for an approved major. Satisfactory performance in this program (B average) will give the student the professional preparation required for an assistantship or fellowship in graduate school. The second major, the major in Chemistry, is designed for students who wish to prepare for such fields as medicine, dentistry, the chemical industry, secondary school teaching, chemical sales work, pharmacy, oceanography, environmental sciences, sanitation chemistry, or veterinary science. Only a minimum number of chemistry courses is required so that a program suited to an individual's interests may be worked out with the student's faculty advisor.

The department participates in multidisciplinary programs for students preparing for careers in medicine, dentistry, or oceanography. Additional information on these programs may be found in the catalogue under *Undergraduate Multidisciplinary and Pre-Professional Programs*.

PROFESSIONAL CHEMISTRY MAJOR

CH 100 (or CS 100), 141-142 (or 131-132), 241-242, 343-344, 381-382, 450; MA 101-102, 201, 316; PH 243-244.

A one year study of German or French at the intermediate level or its equivalent. (A Professional Chemistry Major beginning a new foreign language is required to take only six hours of that language.) Students must also elect three advanced courses, at least two of which should be in chemistry at or above the 390 level and have CH 344 and CH 382 as prerequisites; making sure that their program contains 500 hours of laboratory instruction. The third course may be selected from a cognate area. (Elective courses must be approved by the advisor.)

CHEMISTRY MAJOR

CH 100 (or CS 100), 141-142 (or 131-132), 242, 343-344, 381-382; MA 101-102 (or MA 103-104 with the permission of the advisor); PH 243-244 (or PH 181-182 with the permission of the advisor); a one-year sequence in a foreign language at the intermediate level or the equivalent.

*The Department of Chemical Sciences is on the list of approved schools of the American Chemical Society.

Chemical Sciences

CHEMISTRY/ GEOLOGY MAJOR

A Major in Chemistry-Geology is offered jointly with the Department of Earth Sciences. (See the catalogue section entitled *Undergraduate Multidisciplinary and Pre-Professional Programs* for detailed information).

CHEMISTRY MINOR

18 credits in chemistry.

PHYSICAL SCIENCE MINOR

18 credits in chemistry and physics.

Additional Comments on Requirements:

The normal freshman program for a student interested in either chemistry major consists of CH 100 (or CS 100), CH 141-142, MA 101-102, and six credits toward the general education requirements. A student need not decide between the two chemistry majors until the second semester of his sophomore year. Students completing the Professional Chemistry major will meet the requirements for certification of the American Chemical Society.

Because of the sequential nature of the courses required of a chemistry major, a student considering majoring in chemistry must take MA 101-102 (or MA 103-104 with the permission of the advisor) and CH 141-142 in the freshman year or plan to attend summer school. For this reason any student considering the possibility of majoring in chemistry should consult a member of the department before registering for freshman courses.

GRADUATE PROGRAMS

MASTER OF ARTS

The Department of Chemical Sciences offers a program leading to the degree of Master of Arts in Chemistry, which is designed to prepare qualified students for research, further graduate study, and teaching. An undergraduate major in chemistry, or its equivalent, is normally required for admission to this program. Applicants must have satisfactorily completed the following: one semester of differential calculus, one semester of integral calculus, two semesters of calculus based physics, two semesters of general chemistry with laboratory, one semester of analytical chemistry, two semesters of organic chemistry and two semesters of physical chemistry. Other laboratory courses in chemistry are desirable.

Applicants must have an interview with the Chairman of the Department.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. In addition to meeting general degree requirements, the student must complete at least 30 graduate credits in chemistry which shall include at least six semester hours of thesis credit (CH 502). All courses must be approved by the advisor.

Each graduate student must satisfactorily complete the following core curriculum or present evidence that it has been successfully completed.

- CH 444 Advanced Inorganic Chemistry
- CH 450 Instrumental Analysis
- CH 597 Advanced Physical Chemistry I
- CH 598 Advanced Physical Chemistry II
- CH 591 Advanced Organic Chemistry I
- CH 592 Advanced Organic Chemistry II

A reading knowledge of German and Russian (or, if approved, a demonstrated competence with another appropriate research tool, such as computer programming) is required for the degree.

The departmental offerings listed below include the following courses which may not be used to meet M.A. degree requirements:

Any Chemistry course numbered below 400, CH 499, and CH 585.

Chemical Sciences

MASTER OF ARTS IN TEACHING

The Department of Chemical Sciences offers programs leading to the degree of Master of Arts in Teaching with concentrations in chemistry and physical science. These programs are designed primarily for teachers of chemistry and physical science. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult M.A.T. degree requirements in the Graduate School section of this catalogue), and a minimum of 18 appropriate graduate credits in chemistry (approved by the program advisor on the basis of the background, interests, and needs of the student).

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all courses at the 100 level, CH 202, CH 210, CH 390, and CH 499.



Chemical Sciences

COURSE OFFERINGS*

- CH 100 Computer Science in Chemistry (1 cr.)**
Introduction to computer programming as used in Chemistry. Particular emphasis will be on applications of BASIC for statistical studies.
- CH 120 Chemistry for the Elementary School Teacher (3 crs.)**
The fundamental laws of chemistry are studied together with their application to elements and compounds, reactions and properties. Two lecture periods and one two-hour laboratory period weekly. The laboratory will be based on experiments in commercially available children's chemistry kits.
- CH 125, 126 Introductory Chemistry for the Life Sciences I-II (4 crs. for each semester)**
A study of the fundamental principals of general, organic and biological chemistry and their applications to physiological systems. Primarily for students of nursing and the allied health professions. Three lecture periods and one two-hour laboratory period weekly. (*Prerequisite: High School Chemistry or the equivalent; CH 125 is a prerequisite to CH 126*)
- CH 131, 132 General Chemistry with Qualitative Analysis I-II (3 crs. for each semester)**
The elements and their compounds, with emphasis on structure and its relationship to properties. CH 131 is a prerequisite to CH 132. Two lecture periods and one two-hour laboratory meeting weekly.
- CH 141, 142 Inorganic Chemistry with Qualitative Analysis I-II (4 crs. for each semester)**
Theoretical inorganic chemistry with emphasis on mass-energy relationships in terms of structure and physical laws. Laboratory work emphasizes quantitative techniques. CH 141 is prerequisite to CH 142. Three lecture periods and one four-hour laboratory period weekly.
- CH 202 Chemistry in Everyday Life (3 crs.)**
A lecture demonstration course on the application of chemistry to selected topics that an individual encounters in his daily life. Sample topics are: a) colloids and their relationship to foods and air pollution; b) acids, bases and pH; the effects of fertilizers; c) drugs; the nature of various chemical classes and their chemical effects on the human body. Three hours lecture.
- CH 210 Chemistry and Society (3 crs.)**
A study of the effects that various discoveries in chemistry have had on society in the past and work that is presently underway in chemistry in an attempt to alleviate problems created by past discoveries.
- CH 241 Inorganic Quantitative Analysis (3 crs.)**
The classical and modern methods for the volumetric and gravimetric determination of elements and groups. Two lecture periods and one four-hour laboratory period weekly. (*Prerequisite: CH 132 or CH 142*)
- CH 242 Intermediate Inorganic Chemistry (3 crs.)**
The descriptive chemistry, as well as synthesis and reactions, of nontransitional elements and their compounds are studied systematically. Correlations of structure and properties are explained on the basis of modern theories. (*Prerequisite: CH 132 or CH 142*)
- CH 250 Instrumentation (3 crs.)**
The physical chemistry basic to modern analytical instrumentation will be discussed as the basis for the study of instrumental analysis. Two hours of lecture and one two-hour laboratory period weekly. (*Prerequisite: CH 132 or permission of the Instructor*)
- CH 252 Recent Developments in Inorganic Chemistry (3 crs.)**
Current topics, such as ligand field theory of coordination complexes, molecular orbital theory, stereochemistry, crystallography, rare-earth elements, nonaqueous solvents, spectroscopy, and kinetics of inorganic reactions will be treated, according to the interests of the students. (*Prerequisite: CH 132 or CH 142*)

*See page 68 for general information regarding course offerings

Chemical Sciences

- CH/PH 260 Microprocessors - Microcomputer Technology (4 crs.)**
A study of the electrical families, components and processes used to build the components of microprocessors and microcomputers. An examination of timing cycles for different microprocessors with limitations on the digital devices used and the various means in which these components can be assembled in the construction of the microcomputer. Comparison of the various microcomputers available. (*Prerequisite: A college level course in PH or permission of the Instructor*)
- CH 270 Introduction to Toxicology (3 crs.)**
This course is for individuals who have an interest in the methods employed to evaluate product safety, forensic chemistry and toxic substances encountered in the environment. Two lecture periods and one two-hour laboratory period weekly.
- CH 280 Physical Chemistry for the Life Sciences (3 crs.)**
A study of the laws governing the physical and chemical behavior of compounds of primary interest to students in the Life Sciences field. Particular application will be made to the thermodynamics, kinetics and equilibria involved in compounds of biological interest. (*Prerequisite: CH 132 or CH 142*)
- CH 290 Environmental Chemistry (3 crs.)**
A study of the chemical aspects of such environmentally important problems as air and water pollution, solid waste disposal, thermal pollution, wastewater treatment, environmental antagonists, mercury pollution, the internal combustion engine, or other topics of current interest. Laboratory work will be concerned with techniques for detecting, monitoring and controlling environmental phenomena. Emphasis will be placed on the use of analytical techniques in determining ecological parameters. Lecture, laboratory and assigned special projects in the field. (*Prerequisite: CH 132 or CH 142*)
- CH 300 Organic Chemistry for the Life Sciences (4 crs.)**
The fundamentals of organic chemistry--structure, synthesis and mechanism--with applications to biological systems. Designed for students in the life sciences, e.g. nursing, medical technology, physical therapy and nutrition. Not recommended for students intending to pursue graduate study in microbiology, physiology or medicine. This course is not open to chemistry majors. Three lectures and one three-hour laboratory period weekly. (*Prerequisite: CH 132 or CH 126*)
- CH 343, 344 Organic Chemistry I-II (4 crs. for each semester)**
A survey of the chemistry and organic compounds organized in terms of structure, mechanism of organic reactions, and synthesis. CH 343 is a prerequisite to CH 344. Three lecture periods and one four-hour laboratory period weekly. (The same course may be taken without laboratory under CH 341, 342) (*Prerequisite: CH 132 or CH 142*)
- CH 372 Marine Chemistry (3 crs.)**
A study of the chemistry of the sea and the chemical exchange between hydrosphere, biosphere, lithosphere and atmosphere. Topics include: composition and properties of seawater, salinity, carbon dioxide system, nutrients and fertility of the ocean, chemical evolutions of the marine sediments and petroleum, chemical products of marine biota, isotope geochemistry, desalination, marine pollution and chemical resources from the ocean. (*Prerequisite: CH 132 or CH 142*)
- CH 381, 382 Physical Chemistry I-II (4 crs. for each semester)**
The laws governing the physical and chemical behavior of compounds. Three lecture periods and one four-hour laboratory period weekly. (*Prerequisite: CH 132 or CH 142; MA 102*)
- CH 389 Introduction to the Chemical Literature (2 crs.)**
An introduction to methods of searching the chemical literature designed to prepare the student for a research project. (*Prerequisite: CH 344 or permission of the Instructor*)
- CH 390 Research Problems in Chemistry (credit to be arranged)**
Special projects for advanced students desiring individual instruction in the methods of chemical research. Hours arranged. (*Prerequisite: CH 344, CH 382 and consent of the Department*)
- CH 392 Laboratory Techniques (3 crs.)**
Special techniques used in the research laboratory, such as glass-blowing, vacuum line technique, vacuum distillation, dry-box operations and advanced synthetic methods. Hours arranged. (*Prerequisite: CH 344, CH 382*)

Chemical Sciences

- CH 396 Introduction to Laboratory Automation (2 crs.)**
The use of microcomputers for data acquisition and analysis. A study of transistors, amplifiers, op. amps., the differential amps, power supplies, regulators and filters as used in laboratory instruments. The interfacing of these instruments, especially using the IEEE-GPIB bus, to microcomputers to receive and analyze data will be covered. Projects will be assigned in which the student works in the laboratory gathering data directly on a computer. One hour of lecture and two hours of laboratory weekly. (*Prerequisite: CH 100 or a knowledge of Basic Programming*)
- CH 440 Advanced Organic Chemistry (3 crs.)**
Selected topics in advanced organic chemistry, such as physical organic chemistry, alicyclic and heterocyclic chemistry, natural products, and advanced synthetic methods. Hours arranged. (*Prerequisite: CH 344, CH 382 or consent of the Instructor*)
- CH 442 Qualitative Organic Analysis (3 crs.)**
The reactions of organic compounds with emphasis on those of importance for classification and identification and the elucidation of structure by spectroscopic analysis. Laboratory work involves the identification of both simple compounds and mixtures. One lecture period and one six-hour laboratory period weekly. (*Prerequisite: CH 344, CH 382 or consent of the Instructor*)
- CH 444 Advanced Inorganic Chemistry (3 crs.)**
The topics of group theory, stereochemistry, ligand field theory, molecular orbital theory, synthesis and kinetics of reactions as applied to transition metal elements will be treated in detail. CH 382 may be taken concurrently. Hours arranged. (*Prerequisite: CH 382, CH 344*)
- CH 450 Instrumental Analysis (3 crs.)**
Theory and practical application of instrumental methods as applied to chemical analysis; including pH measurements, electro-deposition, potentiometry, crystallography, mass spectrometry and spectroscopy. CH 382 may be taken concurrently. Two lecture periods and one four-hour laboratory period weekly. (*Prerequisite: CH 382*)
- CH 461 General Biochemistry I (4 crs.)**
A survey of the chemical components of living matter and the major processes of cellular metabolism. Three lecture periods and one three hour laboratory period weekly. (*Prerequisite: CH 344 or consent of the Instructor*)
- CH 462 General Biochemistry II (3 crs.)**
A survey of the chemical components of living matter and the major processes of cellular metabolism. Three lecture periods weekly. The laboratory portion may be taken independent of the lecture under CH 466, Advanced Biochemistry Laboratory. (*Prerequisite: CH 461*)
- CH 466 Advanced Biochemistry Laboratory (2 crs.)**
A study of special laboratory techniques used in biochemical research, such as chromatography, enzymology, radiochemical techniques, electrophoresis, and metabolic pathways. An individual project will complete the laboratory. One hour of laboratory discussion and three hours of laboratory per week. (*Prerequisite: CH 461*)
- CH 498 Internship in Chemical Sciences (3-15 crs.)**
Laboratory experience in industrial or government laboratories, regulating agencies or academic laboratories at other institutions. (*Prerequisite: Consent of the Department*)
- CH 499 Directed Study in Chemistry (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- CH 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- CH 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

Chemical Sciences

- CH 512 Microcomputers as Laboratory Instruments (4 crs.)**
An introduction to the use of microcomputers in the laboratory in the physical sciences. This course is designed for practicing science teachers with no background in computer science. Topics to be considered will include the following: survey of microcomputer electronics; the organization of microcomputers; survey of available microcomputers, microcomputer printers and disc drives; available microcomputer languages; microcomputer operating systems; available microcomputer laboratory software in the physical sciences; laboratory data acquisition; microcomputer interfacing; and the use of simple microcomputer interfaces in the science laboratory. (*Prerequisite: Science teaching experience and a one-year introductory course in a physical science or consent of the Instructor*)
- CH 582 Biochemistry — Topics (3 crs.)**
An in-depth examination of one area in biochemistry. Included will be a discussion of: laboratory techniques used in separation and purification, chemical structures and the interactions and functions of the biomolecules appropriate to the area of study. A critique of original literature will also be included. (*Prerequisite: CH 462 or permission of the Instructor*)
- CH 585 Atomic and Molecular Structure (3 crs.)**
A modern approach to atomic and molecular structure will be developed and applied to selected cases from inorganic and organic chemistry. Topics to be covered will include the following: atomic structure, the molecular orbital approach to molecular structure, antibonding orbitals, introductory ligand field theory, geometrical and optical isomerism, conformational analysis, correlation of structure and reactivity, and the conservation of orbital symmetry. (*Prerequisite: Permission of the Instructor*)
- CH 591 Advanced Organic Chemistry I, Structure (3 crs.)**
Instrumental techniques of organic structure determination such as infra-red, ultraviolet and proton magnetic resonance spectroscopy and methods of separation and identification. Classic examples of modern structure proofs will be considered in detail. Students will conduct a literature search on the structure of an organic molecule and present a short seminar on this structure proof. Practical experience with IR, UV, NMR and gas chromatography of the structure of an unknown organic molecule. (*Prerequisite: CH 344*)
- CH 592 Advanced Organic Chemistry II, Mechanism and Synthesis (3 crs.)**
A one-semester course in advanced organic chemistry designed for participants who have some background in elementary organic chemistry. Topics to be considered will include recent developments in the mechanism of organic reactions and organic synthesis. Special topics may include valence tautomerism, biogenetic synthesis, photochemistry, cycloaddition reactions and the Woodward-Hoffman rules for the conservation of orbital symmetry. (*Prerequisite: CH 344 and 591, or permission of the Instructor*)
- CH 597 Advanced Physical Chemistry I, Chemical Thermodynamics & Statistical Thermodynamics (3 crs.)**
The zeroeth, first and second laws of thermodynamics, entropy and free energy functions, probability and the thermodynamic functions from a statistical consideration, the partition function. (*Prerequisite: CH 382*)
- CH 598 Advanced Physical Chemistry II, Atomic & Molecular Structure and Kinetics (3 crs.)**
An introduction to quantum chemistry, rotational and vibrational levels, first, second and third order reactions, the Arrhenius Equation and energy of activation, consecutive reactions, collision and transition state theories. (*Prerequisite: CH 382*)

Department of Earth Sciences and Geography

Chairperson: Professor Robert Boutilier

Professors: Robert Dillman, Richard Enright, Ira Furlong,

Emanuel Maier, Agrippina Macewicz

Associate Professor: Jacek Sulanowski

Assistant Professors: Timothy Barker, Paul Blackford

Marilyn Furlong, Glenn Miller, Reed Stewart

The Department of Earth Sciences and Geography offers undergraduate majors in Earth Sciences and Geography. Majors in Earth Sciences may elect a concentration in Geology. In addition, programs in Chemistry-Geology, Oceanography, and Urban Affairs and Planning are available. See *Undergraduate Multidisciplinary and Pre-Professional Programs* starting on page 296 of this catalogue.

The department works actively with state and regional agencies on environmental problems. Research on alternate energy sources, coastal storm impacts, regional transportation planning, coal potential in Southeastern Massachusetts, and the impact of PCB's in New Bedford Harbor are some of the current projects.

Programs leading to the degree of Master of Arts in Teaching with a concentration in earth sciences or geography are offered by the Department.

Modern equipment enables the department to offer investigation oriented laboratory experience. This equipment includes: (1) an X-ray Diffractometer with powder cameras; (2) thin section equipment; (3) polarizing and stereoscopic microscopes; (4) atomic absorption spectro-photometer; (5) seismic refraction unit; (6) surveying equipment; (7) a proton precession magnetometer; (8) earth resistivity unit; (9) Frantz Isodynamic Separator; and (10) coastal research vessel.

In addition, the department has a well-equipped cartographic laboratory, a climatological station with solar radiation recording instrumentation, a solar greenhouse classroom at the Burnell Campus School, an astronomy observatory, and a wet geochemistry laboratory. Finally, this department has access to a scanning electron microscope through the Southeastern Massachusetts Consortium.

UNDERGRADUATE PROGRAMS

GEOGRAPHY

BACHELOR OF ARTS/BACHELOR OF SCIENCE

The geography major is designed to provide the student with an understanding and appreciation of the physical and cultural attributes of the world in which he lives.

Opportunities for graduates include careers as geographers or cartographers in private industry, in many federal, state and local agencies, in urban and regional planning, in marketing and business offices, in governmental or private environmental offices, and as secondary school teachers. Courses leading to specialization in the following areas are available:

1. Urban and Regional Planning*
2. Environmental and Resources Management*
3. Business*
4. Regional Studies
5. Education

*Internships are available within these areas.

Earth Sciences & Geography

GEOGRAPHY MAJOR

GE 100, GS 110, GE 216, GE 304, GS 362, GE 471, GS 353, or GS 473; three additional Physical Geography or Earth Sciences courses; one course from: GE 217, GE 354, GE 363, GE 418, GE 440; one regional geography course; MA 110 plus one year of mathematics; competence in a modern foreign language at the intermediate level, as evidenced by completion of an intermediate level one year course, or an equivalent.

Not more than one "D" for a semester course in the major shall be accepted to fulfill the requirements for this program.

GEOGRAPHY MINOR

GE 100, GS 110 plus four additional Geography courses recommended by the department.

EARTH SCIENCES

The major in earth sciences is a broad based program that provides the student with an understanding and appreciation of the physical aspects of the earth and universe. Career opportunities for graduates exist in government service, industry, conservation and park management, and environmental studies relating to environmental impact statements as well as in teaching in the secondary schools.

EARTH SCIENCES MAJOR

ES 100, ES 101, ES 284, ES 301 or 302, GE 303, ES 306, ES 372, ES 463, plus a minimum of three additional courses selected with the advisor's approval.

MA 101-102 or MA 103-104, CH 131-132 or CH 141-142, one year of Physics or Biology.

Competence in a modern foreign language at the intermediate level, as evidenced by completion of an intermediate level one year course, or an equivalent.

Not more than one "D" for a semester course in the major shall be accepted to fulfill the requirements for this program.

EARTH SCIENCES MINOR

ES 100, ES 101 plus four additional Earth Science courses as recommended by the department.

GEOLOGY CONCENTRATION

The concentration in geology provides students with an understanding of the physical aspects of the earth and the processes which act upon it. Students are prepared for government service, environmental work relating to impact studies and, for work in such fields as engineering, mining or petroleum geology.

ES 100, ES 101, ES 283, ES 284, ES 372, ES 463, ES 475; Four additional courses selected with the advisor's approval;

MA 103-104 or MA 101-102;

CH 131-132 or CH 141-142;

Physics or Biology PH 181-182 or PH 243-244 or BI 100, 104.

Competence in a modern foreign language at the intermediate level, as evidenced by completion of an intermediate level one year course, or an equivalent.

Not more than one "D" for a semester course in the major shall be accepted to fulfill the requirements for this program.

CHEMISTRY- GEOLOGY MAJOR

A Major in Chemistry-Geology is offered jointly with the Department of Chemical Sciences. See the catalogue section *Undergraduate Multidisciplinary and Pre-Professional Programs* for details.

GEO-PHYSICS MINOR

A minor is jointly offered with the Department of Physics. For further information, contact the department chairpersons.

Earth Sciences & Geography

GRADUATE PROGRAMS

MASTER OF ARTS IN TEACHING

The Department offers a program leading to the degree of Master of Arts in Teaching with concentrations in earth sciences and geography, which are designed primarily for in-service teachers to provide a foundation for further graduate work. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Graduate students enrolled in the M.A.T. program are required to have, or acquire outside of the degree program, a background of introductory college level courses in natural science and mathematics, to be determined by the department. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult M.A.T. degree requirements in the Graduate School section of this catalogue), and a minimum of 18 appropriate graduate credits in the academic concentration (approved by the program advisor on the basis of the background, interests, and needs of the student).

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all courses in the 100 level, ES 201-202, ES 499, GE 499, GS 210, and GS 261-262.



Earth Sciences & Geography

COURSE OFFERINGS*

GEOGRAPHY AS A SOCIAL SCIENCE

Descriptions for courses in Geography as a Social Science are found in the Division of Social Sciences.

EARTH SCIENCES

- ES 100 Physical Geology (formerly ES 181) (3 crs.)**
The constitution of the earth and the processes acting on and within it. Two lecture periods and one two-hour laboratory period weekly.
- ES 101 Historical Geology (formerly ES 192) (3 crs.)**
The origin and evolution of the earth and the life upon it. Two lecture periods and one two-hour laboratory period weekly. (*Prerequisite: ES 100*)
- ES 102 History of the Earth (3 crs.)**
The origin and evolution of the earth and the life upon it. Major topics are geologic time, origin, and evolution of the continents, continental drift, plate tectonics. (May not be taken for credit if student has taken ES 101). (*Prerequisite: ES 100*)
- ES 130 Extraterrestrial Life (3 crs.)**
An investigation into the possibility of the existence of life elsewhere in the universe. The topics covered include: the origin of the elements, other solar systems, communication with other terrestrial life and the consequences of contact. Does not fulfill GER science requirement.
- ES 194 Environmental Geology (3 crs.)**
Waste disposal, slope stability, shoreline and hydrologic problems, seismic and perma frost conditions and other topics as they pertain to the geologic environment in selected physiographic provinces of North America will be studied.
- ES 201 Topics in Earth Science for Elementary School Teachers (3 crs.)**
An introduction to rocks, minerals, fossils, and the processes that mold the earth's surface such as running water, glaciers, winds, and waves. Emphasis will be on investigations that can be conducted in the classroom or in the immediate vicinity of a school, with topics selected from, but not restricted to, nationally developed science curricula. Two one-hour lectures and one two-hour lab.
- ES 220 Ceramic Materials (3 crs.)**
The geologic processes producing the raw ceramic materials, their identification, extraction and purification as well as chemical treatments to alter their physical and chemical properties. Also, the physical and chemical changes occurring in such materials during drying and firing. (*Prerequisite: Permission of the Instructor*)
- ES 230 Engineering Geology (3 crs.)**
Geologic controls of engineering projects. Identification and treatment of problem areas. (*Prerequisite: Permission of the Instructor*)
- ES 240 Hydrology (3 crs.)**
Relations of surface to groundwater. Geologic controls of flow in ideal mathematical models and imperfect natural settings. Water supplies as reversible resource. (*Prerequisite: Permission of the Instructor*)

*See page 68 for general information regarding course offerings

Earth Sciences & Geography

- ES 283 Structural Geology (3 crs.)**
Analysis and origin of rock structures. Two lecture periods and one two-hour lab period weekly. (*Prerequisite: ES 100, 101*)
- ES 284 Geomorphology (3 crs.)**
Relationships between gradational and tectonic forces and the resulting surface configuration of the earth. Two lecture periods and one three-hour laboratory period weekly. (*Prerequisite: ES 100 or consent of the Instructor*)
- ES 300 Excursions in Geology (3-6 crs.)**
Preliminary lectures on a study area, followed by 1 to 6 weeks of interdisciplinary field study leading to a final report. Travel and living expenses will be borne by students. Study area will most likely be in the western U.S. although foreign areas are possible. This course is of interest to archaeology, biology, and geography majors as well as other students. (*Prerequisite: Permission of the Instructor*)
- ES 301 Astronomy (3 crs.)**
A study of the celestial sphere, motions of the moon and planets, and the history of man's attempts to understand these phenomena. There will be evening observation sessions and a trip to a nearby planetarium. (*Prerequisite: GE 100, GE 120, MA 103, PH 181 or consent of the Instructor*)
- ES 302 Astronomy II (3 crs.)**
This course will be devoted to the study of the planets, the stars, stellar evolution, galaxies, cosmology and life in the universe. There will be evening observation sessions. (*Prerequisite: ES 301 or consent of the Instructor*)
- ES 305 Introduction to Oceanography I (3 crs.)**
Survey of marine life forms and of the chemistry of seawater. (*Prerequisite: BI 100, BI 102, or consent of the Instructor*)
- ES 306 Introduction to Oceanography II (3 crs.)**
Ocean water temperature, circulation, salinity, instruments and methods of investigation. (*Prerequisite: MA 101, 102, or 103 and MA 104 or consent of the Instructor*)
- ES 310 Geophysics (3 crs.)**
A study of major earth forces, including discussions of the interior of the earth, heat distribution, convection and continental drift. (*Prerequisite: Permission of the Instructor*)
- ES 311 Geochemistry (3 crs.)**
Geological and chemical processes controlling the abundance and distribution of the elements at or near the earth's surface. (*Prerequisite: Permission of the Instructor*)
- ES 372 Mineralogy (4 crs.)**
Geometrical and X-ray crystallography followed by the determinative mineralogy of ore and rock-forming minerals. Two lecture periods and two two-hour laboratory periods weekly. (*Prerequisite: ES 100 and CH 131*)
- ES 373 Optical Mineralogy (3 crs.)**
Principles of optical crystallography. Measurement of optical constants with the polarizing microscope. One lecture period and two two-hour laboratory periods weekly. (*Prerequisite: ES 372*)
- ES 374 Optical Petrology (3 crs.)**
Systematic study of rocks and rock-forming minerals with emphasis upon the use of the polarizing microscope, interpretation of mineral assemblages, texture and structures, problems of petrogenesis. One lecture period and two two-hour laboratory periods weekly. (*Prerequisite: ES 373*)
- ES 375 X-ray Analysis (3 crs.)**
Principles and methods of X-ray diffraction analysis. Theory and practice of preferred orientation chemical analysis by diffraction and fluorescence. (*Prerequisite: Permission of the Instructor*)
- ES 413 Survey of Physical and Historical Geology (3 crs.)**
The structure and history of the earth as deduced from the study of life forms and their physical environment. Two lecture periods and one two-hour laboratory period weekly. Biology majors only.

Earth Sciences & Geography

- ES 462 Geology of North America (3 crs.)**
Physiographic provinces of North America in terms of geomorphology and structural relationships. (Prerequisite: ES 100)
- ES 463 Petrology (3 crs.)**
Megascopic and microscopic classification of rocks and an introduction to petrogenesis. One lecture and two two-hour laboratory periods weekly. (Prerequisite: ES 372)
- ES 464 Economic Geology I (3 crs.)**
Geochemical and physical processes that produce economic mineral deposits. Two lecture periods and one two-hour laboratory period weekly. (Prerequisite: ES 100)
- ES 465 Economic Geology II (3 crs.)**
Study of selected major metallic and non-metallic deposits, energy sources and hydrologic reserves. Methods of extraction and the resulting environmental impact. Two lecture periods and one two-hour laboratory period weekly. (Prerequisite: ES 100)
- ES 466 Glacial Geology (3 crs.)**
The mechanics of glacial origin and movement, and the erosive and depositional features produced. Emphasis on the Pleistocene of North America. Two lecture periods and one two-hour laboratory period weekly. (Prerequisite: ES 100)
- ES 475 Paleontology (3 crs.)**
A survey of the fossil record stressing the most important invertebrate phyla and their environmental relationships. Two lecture periods and one two-hour laboratory period weekly. (Prerequisite: ES 100, 101 or consent of the Instructor)
- ES 476 Sedimentology and Stratigraphy (3 crs.)**
Introduction to modern concepts and principles in sedimentology, paleoecology, and correlation: lithostratigraphic and biostratigraphic classification and interpretation of depositional and organic environments. Two lecture periods and one two-hour laboratory period weekly. (Prerequisite: ES 100, 101 or consent of the Instructor)
- ES 477 Micropaleontology (3 crs.)**
Identification and analysis of selected microfossils, Homeomorphism, Sexual Polymorphism, and evolution of microfossils. Ultra structures and the diagenesis. (Prerequisite: Permission of the Instructor)
- ES 490 Field Methods in Geology (3 crs.)**
Collection, processing and interpretation of field data developed by geologic mapping. Presentation of geologic reports involving maps, cross-sections and sample data. One lecture period and two two-hour laboratory periods weekly. (Prerequisite: ES 100, 101 or consent of the Instructor)
- ES 497 Research in Earth Science (3 crs.)**
Preparation of a research paper in Earth Sciences.
- ES 498 Field Experience in Earth Science (3-15 crs.)**
Intended to provide an opportunity for senior earth science majors to gain practical experience in the field. Placements will be made in appropriate local, state and federal agencies as well as with private corporations. (Prerequisite: Consent of the Department)
- ES 499 Directed Study in Earth Science (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (Prerequisite: Consent of the Department)
- ES 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

Earth Sciences & Geography

- ES 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

PHYSICAL GEOGRAPHY

- GE 100 Man's Physical Environment (3 crs.)**
An introduction to physical geography in which man-land relationships and the interaction of man with his total environment, including its landforms, atmosphere, climate, vegetation, and soils are examined. Field trips. Two lecture periods and one two-hour laboratory period weekly. (May not be taken for credit if student has taken GE 120.)
- GE 120 Man's Physical World (3 crs.)**
This non-lab science course will treat the earth as the home of man. Basic concepts of physical geography will be studied including how man has changed the earth. (May not be taken for credit if student has taken GE 100.)
- GE 196 Geography of Environmental Problems I (3 crs.)**
Interaction between man and his physical environment through the analysis of selected problems in population ecology, atmospheric pollution and climate change, water resource characteristics and distribution, soil contamination and erosion, and perception of environmental hazards of human settlement such as hurricanes, drought, floodplains, coastal erosion, earthquakes, and landslides.
- GE 216 Cartography (3 crs.)**
Theory and practice in the design and drafting of maps, graphs and charts for the graphic presentation of geographical and statistical information. One lecture period and four laboratory hours weekly. Additional laboratory time may be required. (*Prerequisite: GE 100 or GE 120 or ES 100 or consent of the Instructor*)
- GE 217 Air Photo Interpretation — Surveying (3 crs.)**
Theory and practice in extracting information about the earth's physical and cultural features from aerial photographs. Introductory plane surveying theory and field practice. Two lecture periods and three laboratory hours per week. Additional laboratory and field time may be required. (*Prerequisite: GE 100 or GE 120 or ES 100 or consent of the Instructor*)
- GE 220 Outdoor-Indoor Investigations in Physical Geography (3 crs.)**
A demonstration and experiment course in physical geography designed for students interested in presenting simple experiments and outdoor environmental problems for elementary school children. Outdoor laboratory units will cover selected topics in weather, energy (solar and water), landscape evaluation, and pollution. A number of indoor demonstrations will be reserved for inclement weather. Two two-hour weekly investigations, including field trips. (*Prerequisite: Consent of the Instructor*)
- GE 303 Meteorology (3 crs.)**
Study of the basic atmospheric processes that result in weather, regional weather systems. Basic instrumentation and practice in observing, data presentation, and interpretation of weather maps. Two lecture periods and one two-hour laboratory period weekly. (*Prerequisite: GE 100, GE 120 or consent of the Instructor*)
- GE 304 Climatology (3 crs.)**
Study of the elements and controls of climate emphasizing their effect on man and the environment, and man's response to and modification of climate. The world distribution of climatic regions. Instrumentation and practice in observing, data, presentation and analysis. (*Prerequisite: GE 100 or GE 120 or GE 303 or consent of the Instructor*)
- GE 307 Management and Preservation of Natural Environment (3 crs.)**
This course is devoted to a detailed examination of the occurrence, exploitation and conservation of natural resources, including minerals, soils, water, forests, grasslands, fisheries, wildlife, recreation areas and scenery. Emphasis is placed on conservation in the United States. (*Prerequisite: Permission of the Instructor*)

Earth Sciences & Geography

- GE 354 Field Methods in Urban Geography (3 crs.)**
A geography analysis of local urban areas and their problems, and the application of concepts learned in GS 353. Hours arranged. (*Prerequisite: GS 353*)
- GE 361 Geography of Environmental Problems II (3 crs.)**
Environmental problems are considered in this course from the geographer's point of view, problems such as population densities and distribution, balanced land use and its philosophic, esthetic, and scientific basis, the circulation of goods and people, and a comparison of levels of development. (*Prerequisite: ES 100 or GE 100 or consent of the Instructor*)
- GE 363 Locational Analysis (3 crs.)**
An introduction to the field of marketing. Areas covered include marketing strategies, advertising, promotion, distribution, research and locational analysis. (*Prerequisite: EC 200 or GS 362 or consent*)
- GE 410 Urban Land Use Mapping (3 crs.)**
The process of mapping urban land uses will be studied with emphasis placed on field work. A total of 90 contact hours working in the field and in an urban planning office is required of all students taking this course. (*Prerequisite: GS 353*)
- GE 411 Energy and the Environment (3 crs.)**
A survey of world energy resources and problems. Patterns of supply and demand and the environmental effects of various types of energy development and utilization. (*Prerequisite: junior or senior standing or consent of the Instructor*)
- GE 412 Solar Energy (3 crs.)**
This course concerns itself with the nature of solar energy, its measurement and distribution along with the factors affecting its availability on earth. Solar technology, collectors, storage and delivery systems will be studied and discussed as well as the relation of solar energy to the total energy problem and the environment. (*Prerequisite: junior or senior standing in a science major or consent of the Instructor*)
- GE 418 Thematic Mapping (Advanced Cartography) (3 crs.)**
This course will mainly deal with the type of maps commonly prepared in planning offices and environmental agencies. While the emphasis will be on cartography, students will gain some field experience in surveying, and data gathering in addition to map design, compilation and drafting. One lecture and four laboratory hours weekly. Additional lab time may be required. (*Prerequisite: GE 216; also recommended are GE 217 and MA 110*)
- GE 420 Principles of Urban and Regional Planning (3 crs.)**
An introduction to the process of planning which deals with the interrelationships of resources, facilities, activities, and people over time and space. (*Prerequisite: Consent of the Instructor and/or GS 353*)
- GE 440 Field Research in Appalachia (3 crs.)**
This course provides the field experience in understanding the interrelationships of social, economic, and physical factors in the Appalachian Region (usually taught in late spring or summer). (*Prerequisite: GS 110, GE 100 or ES 100, or consent of the Instructor*)
- GE 471 Seminar In Geography (3 crs.)**
The historical development of methods and techniques used in geographic research. Preparation of a research paper on a problem selected from one of the subdivisions of geography. For senior Geography majors. Two periods weekly for three quarters.
- GE 474 Quantitative Geography (2 crs.)**
The use of statistical techniques, and computer and model building methodology to analyze various spatial phenomena. (*Prerequisite: MA 110 or consent of the Instructor*)
- GE 497 Research in Geography (2 crs.)**
Preparation of a research paper in Geography.
- GE 498 Internship in Urban and Regional Planning (3-15 crs.)**
Student internship in a local planning department or agency. The purpose of this internship is to provide a student with experience in various aspects of his planning interests. (*Prerequisite: Consent of the Department*)

Earth Sciences & Geography

- GE 499 Directed Study in Geography (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- GE 500 Planning and Urban Environment (3 crs.)**
Philosophy and problems of urban and regional planning.
- GE 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- GE 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- GE 520 Improving the Teaching of Earth Science, Geography and Energy I (3 crs.)**
To update and improve the background of teachers with respect to new development in geography, earth sciences and energy education. (This course is funded by a National Science Foundation Grant and is intended for elementary school teachers.) (*Prerequisite: Permission of the Instructor*)
- GE 521 Improving the Teaching of Earth Science, Geography, and Energy II (3 crs.)**
Evening workshops and Saturday field trips designed to aid teachers in the implementation of curriculum material. Two required Saturday field trips will be taken to the Boston Museum of Science and power plants in the greater Boston area. (*Prerequisite: GE 520 or Consent of the Instructor*)
- GE 540 Introduction to Hazardous Waste Management (3 crs.)**
Course is designed to provide graduate students with an understanding of the major issues surrounding the management of hazardous waste. Topics to be covered include: the generation of hazardous wastes and their characteristics as defined by the Resource Conservation and Recovery Act (RCRA), the problems of abandoned disposal sites, alternative hazardous waste, disposal technologies, siting of a hazardous waste management facility, and federal and state laws covering hazardous waste management. (*Prerequisite: GE 100 or GE 120 or ES 100 or ES 194 or consent of the Instructor*)

Department of Management Science and Aviation Science

Chairperson: Assistant Professor Frederick Sheppard

Professor: Kenneth Howe, Acting Coordinator of Aviation Science Program

Associate Professor: John DeLuca

Assistant Professors: Peter Bergstrom, Jon Bryan,

Mercer Georgopoulos, Frederick Heap, George Ladino,

Richard Quindley, Kathleen Sevigny, Harold Silverman, Kevin Wall

The Department of Management Science and Aviation Science offers undergraduate majors in Management Science and Aviation Science with a number of available concentrations. Majors in Management Science may concentrate in General Management, Environmental and Energy Resources Management, Finance and Accounting Management, Information Systems Management, Marketing Management, and Transportation Management. Majors in Aviation Science may concentrate in either Flight Training or Aviation Management.

The Department works actively with the aviation industry and the business community of Massachusetts and its surrounding area.

MANAGEMENT SCIENCE

The Management Science major is designed to educate students for successful careers as business and management leaders. The program provides general education, other liberal arts courses, and specific management education for students interested in careers in business, transportation, energy and environmental resources fields, and in finance and accounting.

Because the major is conducted within a strong liberal arts framework, students are encouraged to understand how business decisions relate to the well-being of society -- culturally, economically, ethically, and socially -- while developing the skills and knowledge to enable them to assume management-related responsibilities.

Students who enroll in the Management program may gain experience through the internships that provide practical, on-the-job training opportunities. These valuable learning experiences, coupled with the College's development as a regional resource for business and industry, offer students significant contact with business and management leaders.

GENERAL MANAGEMENT CONCENTRATION

AC 240, 241, 350; MG 130, 140, 200, 305, 360, 370, 385, 490; EC 200, 300; MA 103, 104, 110, 318; CC 200; PO 379; CS 105 and any one CS programming course; ES 100 or GE 100; one elective from GE 363, PY 313, SO 332 or SO 350.

Management Science and Aviation Science

ENERGY AND ENVIRONMENTAL RESOURCES MANAGEMENT CONCENTRATION

AC 240, 241, 350; MG 130, 140, 200, 305, 360, 385; EC 200, 300; MA 103, 104, 110; CC 200; ES 100, 194, 240, 464; GE 100, 216, 217, 307, 361, 411, 412, 471; CH 131, 132; CS 105 and any one CS programming course.

FINANCE AND ACCOUNTING CONCENTRATION

AC 240, 241, 330, 340, 341, 345, 360, 361, 492; MG 130, 140, 200, 305, 306, 360, 365, 385; EC 200, 300, 315; MA 103, 104, 110, 318; CC 200; ES 100 or GE 100; CS 105 and any one CS programming course.

INFORMATION SYSTEMS MANAGEMENT CONCENTRATION

AC 240, 241, 350; MG 130, 140, 200, 305, 360, 380, 385, 445, 450, 480; EC 200, 300; MA 103, 104, 110; CC 200; CS 101, 102, 206, 210, 211, 280, 395, 410; ES 100 or GE 100.

MARKETING CONCENTRATION

AC 240, 241, 350; MG 130, 140, 200, 305, 320, 324, 360, 364, 385, 410, 420, 430, 440, 491; EC 200, 300; MA 103, 104, 110; CC 200; GE 363; ES 100 or GE 100; CS 105 and any one CS programming course; PY 280.

TRANSPORTATION CONCENTRATION

AC 240, 241, 350; MG 130, 140, 200, 305, 360, 385; EC 200, 300; MA 103, 104, 110, 200; CC 200; CS 105 and any one CS programming course; SO 306; PO 376, 379; GE 216, 471; GS 353, 362, 430; ES 100 or GE 100.

MANAGEMENT SCIENCE MINOR

Students from liberal arts and other programs may elect this minor to broaden their background and expand their potential in job related areas of their respective disciplines. The central purpose of this minor is to provide initial exposure to the basic areas of business and the environment of the business world.

Required courses: AC 240, MG 130, 200; choose three electives from the following: AC 241, 350, 353; EC 200, 300; MG 140, 360.

AVIATION SCIENCE

The Aviation Science Program is designed to provide a coordinated program combining liberal arts with concentrations in either *Flight Training* or *Aviation Management*. This major leads to a degree of Bachelor of Science or Bachelor of Arts. Students interested in future positions in industry-related aviation, especially as either pilots or as managers, will benefit from this program. Numerous other careers may be realized from either of these concentrations and other options provided by the Aviation Science Program. For complete information on this program consult with Dr. Kenneth Howe, Acting Coordinator of the Aviation Science Program.

FLIGHT TRAINING CONCENTRATION

AS 101, 102, 103, 105, 201, 202, 203, 204, 205, 211, 212, 301, 302, 303, 305, 306; MG 130; MA 103-104, MA 110; PH 181-182; CC 200; CS 100; GE 100, GE 217, GE 303; EC 200.

AVIATION MANAGEMENT CONCENTRATION

AS 101, 102, 103, 105, 305, 306, 307, 308, 402, 407; MG 130, 140; MA 103-104, MA 110; PH 181-182; CC 200; CS 100, one computer programming course; GS 362; EN 201; one environmental science course; EC 200; AC 240-241.

Management Science and Aviation Science

AVIATION SCIENCE MINOR

The minor is divided into two options: a *Flight Option* and an *Aviation Management Option*.

Flight Option: AS 101, AS 102, AS 103 (flight courses--additional fees involved), AS 105, MG 130, plus electives selected from list below for a minimum of 18 credit hours.

Aviation Management Option: AS 305, MG 130, MG 140, plus electives selected from list below for a minimum of 18 credit hours.

Electives: AS 101, 102, 103, 105, 201, 202, 203, 204, 205, 211, 212, 301, 302, 303, 305, 306, 307, 402, 407, and MG 140. (All flight courses involve flight fees)

IMPORTANT: All flight courses will be taken at appropriate Federal Aviation Regulation (FAR) Part 141 approved flight schools authorized by the College.

PHYSICAL EXAMINATIONS

Students seeking admission to the Flight Training Concentration must pass a Class II or better FAA physical examination; a Class III FAA physical is required for the Aviation Management Concentration or any other program involving flight courses. A copy of the certification for the appropriate flight physical must be on file with the Aviation Science Coordinator *BEFORE FLIGHT TRAINING BEGINS*.

ACADEMIC CREDIT FOR FLIGHT TRAINING

The following procedures for granting academic credit for flight and flight related ground school training for both new students and transfer students are in accord with pertinent College policies and are designed to promote academic quality and to maximize safety for the participants in the Aviation Science Program. All students requesting academic credit from Bridgewater State College for flight and flight related ground school training are subject to these provisions. Credit for all other course work will be considered as specified in the College Catalog under the sections concerning *Transfer Admissions* and *Transfer of Credits After Admission*.

ENTERING FRESHMEN AND TRANSFER STUDENTS

Freshmen or transfer students entering Bridgewater State College may request up to eighteen (18) credits for previous work in flight and flight related ground school training under the following provisions:

1. To obtain credit for flight training, the student must:
(a) provide valid documentation* of the flight training concerned, (b) hold a current, appropriate flight physical certificate, and (c) pass a flight proficiency test conducted by an Aviation Science Program flight instructor. (Additional flight training may be required if a student has difficulty passing the flight proficiency test.) All costs for the flight proficiency test (and any additional flight training) will be borne by the applicant.
2. Credit for training in FAA certified ground schools may be obtained by providing valid documentation* of the training concerning.

*Valid documentation includes pertinent log books and other certificates, licenses, and verification of the training from the school(s) concerned. This verification must be in the form of a statement which identifies the school, describes the curriculum under which the training was taken, and specifies the number of class hours involved. The statement must be signed by the *chief flight instructor* of the school. (The standard ratio for relating hours to academic credit is 18 class hours for 1 academic credit.) Full credit will be granted for courses from flight schools operating under Federal Aviation Regulation (FAR) Part 141 curricula, and half credit for training from schools utilizing the FAR Part 61 program.

Credit authorized by the above procedure for flight and flight related ground school courses may be applied as follows:

Students entering the Flight Training Concentration may apply up to fifteen (15) credits toward the academic major; any additional authorized flight training credit will be designated as free electives. At least fifty percent (50%) of the credits in any major field (major department) must be earned at Bridgewater State College.

Management Science and Aviation Science

Students entering the Aviation Management Concentration may request seven (7) academic credits toward the required private pilot's license; any additional credits may be applied toward free electives *only*.

Students entering the Aviation Science Minor may apply nine (9) credits toward the minor; any balance may be credited toward free electives.

Students who neither major nor minor in Aviation Science may be granted up to eighteen (18) academic credits toward free electives.

Authorized flight training credits specified above for the major, minor, and free electives may be applied toward the College graduation requirement of 120 credits (minimum).

STUDENTS ENROLLED AT BRIDGEWATER STATE COLLEGE

After a student is officially enrolled at Bridgewater State College, academic credit from other institutions will be granted only as specified by College policy. Under special conditions where the College cannot provide the required course work, such as students being out of commuting range of the College during the summer, a student may apply for permission to earn credits at other institutions. The procedure which follows must be completed *BEFORE* courses are taken elsewhere. **PERSONS (IN ANY MAJOR) WHO TAKE COURSES AT OTHER INSTITUTIONS/SCHOOLS WITHOUT FOLLOWING THIS PROCEDURE WILL NOT BE GRANTED CREDIT AT BRIDGEWATER STATE COLLEGE.**

Procedure:

1. A form for requesting transfer credits may be obtained from the Office of the Registrar.
2. The completed form, together with an identification of the proposed school and a description of the courses involved, must be submitted to the Coordinator of the Aviation Program, or a designee, for Departmental approval. The Aviation Science Program is based on the quality specified in the Federal Aviation Regulation Part 141, and credit will be accepted *only* from FAR Part 141 approved schools.
3. Upon completion of courses taken at other institutions, students must satisfy the same conditions as set forth for entering freshmen and transfers, i.e., providing valid certification and passing a flight proficiency test, as described above.

The student is responsible for insuring that all transcripts, certificates, or other documentation are submitted to the Registrar of Bridgewater State College, with copies to the Aviation Science Coordinator, within six weeks after the completion of training. Official transcripts must be sent from the training institution *directly* to Bridgewater State College. They must not be transported by the student.

Please note: Additional detailed information on the Aviation Science Program is available. To receive a copy, call (617) 697-1237 or write Admissions, Bridgewater State College, Bridgewater, Massachusetts 02324.



Management Science and Aviation Science

COURSE OFFERINGS*

MANAGEMENT SCIENCE

MG 130 Principles of Management (3 crs.)

The principles and techniques underlying the successful organization and management of business activities. This course combines the traditional analysis of management principles with the behavioral approach to case studies. The study includes the management functions of planning, organization, leadership, staffing control, and the decision-making process. Three lectures weekly.

Note: MG 130 is prerequisite to all other Management courses.

MG 140 Human Resources Management (3 crs.)

A study of the staffing, compensation systems, individual and group behavior, employee development, and human resource management systems. Three lectures weekly.

MG 200 Marketing Principles (3 crs.)

Develops students' understanding of the marketing function of an organization through: a survey of the history of marketing from its inception as "Distribution" through the marketing concept being implemented in the 1980's; in-depth study of the elements of the marketing mix (product, price, place, and promotion); impact of external legal, political, sociological, and technological forces upon the marketing manager; and the structure and placement of the marketing organization presented through lecture, case study, and projects. (*Prerequisite: MG 130, EC 200, or permission of the Department*)

MG 305 Business Law I (3 crs.)

A comprehensive study of law and the judicial process; the legal relationships among man; society and the business community; an analysis of the concept and legal consequences of contracts; business torts and crimes; consumer protection; personal property and bailments recovered.

MG 306 Business Law II (3 crs.)

A study of the basic legal principles encountered by management in the area of sales, commercial paper, agency, partnerships, corporations and government regulation of business. (*Prerequisite: MG 305*)

MG 320 Retail Management (3 crs.)

An analysis of retail principles with emphasis on organization, consumer demand, store layout, buying merchandise, control and turnover of stock and retail sales promotion. The case method is utilized. (*Prerequisite: MG 200*)

MG 324 Advertising (3 crs.)

A comprehensive survey of advertising and its applications in business and society. Among the topics considered are an historical survey of advertising, regulation of advertising, buyer behavior, advertising agencies, advertising media, copy and campaign management. (*Prerequisite: MG 200*)

MG 360 Business Data Processing (3 crs.)

An introduction to data processing from manual systems to computers; recent developments in the field; the equipment involved; how the equipment is used; how it operates; and the application of data processing systems will be covered. The course will aid students in applying the capabilities of the computer to their fields of study. The student will interact with a time sharing terminal and will learn the fundamentals of programming in the "BASIC" language. (*Prerequisite: CS 100 or CS 210 or consent*)

MG 364 Marketing II (3 crs.)

Teaches the principles of formulating a marketing program. The course demonstrates how and why marketing programs are affected by the marketing forces that bear on the firm while remaining consistent with the needs of the target market segment. (*Prerequisite: MG 200, MG 375 or PY 280*)

MG 365 Federal Income Taxation I (3 crs.)

Provides background in Federal Income Tax Law and the regulations of the Treasury Department. Deals primarily with the basic philosophy of taxation, taxable income, allowable deductions, and gains and losses in sales and exchanges of property for the individual taxpayer. Serves also as an introduction to the federal taxation of partnerships and corporations. Emphasizes preparation of federal income tax return and the development of the ability to utilize various references in dealing with tax accounting problems. Discusses tax planning. (*Prerequisite: AC 341*)

*See page 68 for general information regarding course offerings

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- MG 366 Advanced Taxation (3 crs.)**
Examines in greater depth federal income tax law and regulations applicable to partnerships, corporations, and fiduciaries. Also covers federal gift and estate tax principles, reorganizations, personal holding companies and the accumulated earnings tax. Emphasizes tax planning, including timing of transactions, appropriate form of transactions, election of methods when alternative methods are made available under the law, and other lawful means to minimize the impact of taxation. Discusses procedures in the settlement of tax controversies. (*Prerequisite: AC 365*)
- MG 370 Production Management (3 crs.)**
This course acquaints the student with the basic principles and methods of production management and control as well as the qualitative and quantitative approaches to problem solving in the production management area. (*Prerequisite: MG 360*)
- MG 380 Data Base Management (3 crs.)**
Presents the logical concepts behind data-base systems. The possible physical configurations, and the nature of data management software. Problems to be addressed include the size of the data-base, storage arrangement, speed of retrieval, as well as relationship of the system to other management components of the organization. (*Prerequisite: one computer programming language course*)
- MG 385 Managerial Finance (3 crs.)**
Provides understanding of the finance function and the responsibilities of the financial manager. Develops concepts and tools for use in effective financial decision making and problem solving. Covers ratio analysis, funds, flow, forecasting, current assets management, budgeting, credit services, formation and cost of capital and impact of operating and financial leverages. (*Prerequisite: AC 241, MG 130*)
- MG 410 Physical Distribution (3 crs.)**
An examination of the Management of Marketing Channel Systems and Subsystems, i.e., transportation, warehousing, inventory control, material handling, packaging and location analysis. Contemporary thought on research techniques as applied to channel operations. (*Prerequisite: MG 200*)
- MG 420 Marketing Research (3 crs.)**
An examination of the market research process used in approaching contemporary marketing problems. Emphasis is placed on the current status of research techniques and their applications. (*Prerequisite: MG 200, MA 110*)
- MG 430 Sales Management (3 crs.)**
Sales programs must be formulated and then implemented. In this age of accelerating product complexity, this course will deal with the sales manager who must understand the importance of these major responsibilities. (*Prerequisite: MG 200*)
- MG 440 Industrial Marketing (3 crs.)**
A study of contemporary market strategy techniques in industrial companies. Emphasis is placed on the case approach where students are provided an opportunity to develop strategies in response to given market opportunities and competitive behavior. (*Prerequisite: MG 200*)
- MG 445 Information Systems Management (3 crs.)**
A course designed to equip students as future users of information systems. It deals with systems issues and management of the computer resource. It assumes only minimal technical background and prepares the student to make decisions on the acquisition of equipment, system analysis and related topics. "Management Problems" are used to relate course material to managerially-oriented decisions. (*Prerequisite: MG 360*)
- MG 450 Problems in Information Systems (3 crs.)**
The content of this course varies. It is intended to introduce the student to significant topics which are not normally offered as separate courses. (*Prerequisite: Approval of the Department*)
- MG 480 Systems Analysis (3 crs.)**
Studies systems analysis and the use of quantitative models and the computer in solving managerial problems in a variety of functional areas. The course introduces systems and models and the stages of a systems-analysis approach and provides an overview of systems applications at functional areas and computer techniques for systems, implementation in finance, operations and marketing. (*Prerequisite: MG 380, MG 445*)

Management Science and Aviation Science

- MG 490 Management Seminar (3 crs.)**
Reading and discussion of important research and literature in student's particular field of interest, culminating in a major written paper. (*Prerequisite: Open to seniors in General Management concentration.*)
- MG 491 Marketing Management Seminar (3 crs.)**
An advanced level marketing course involving the discussion of specialized areas of marketing not covered previously; detailed analysis of marketing media and areas of special interest, highlighted by visiting outside lecturers. Culminating in a major written paper. For senior students. (*Prerequisite: MG 364.*)
- MG 498 Internship in Management (3-15 crs.)**
A non-classroom experience designed for a limited number of junior and senior majors to complement their academic preparation. (*Prerequisite: Consent of the Department Chairperson; Formal application required*)
- MG 499 Directed Study in Management (1-3 crs.)**
Open to junior and senior majors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department; Formal application required*)



Management Science and Technology Council: Michael Arieta, a Management Science major, reports to the members of the Management Science and Technology Council on his recent internship with the Greater Attleboro-Taunton Regional Transit Authority (see page 26 for profile of Management Science and Technology Council)

Management Science and Aviation Science

ACCOUNTING

- AC 240 Accounting I (3 crs.)**
Preparation of accounting statements; cash receivables, liabilities and inventory valuation; corporate financial reporting. Does not satisfy GER's.
- AC 241 Accounting II (3 crs.)**
Investments, fund and cash flow analysis, budgetary control, introduction to cost accounting. Does not satisfy GER's. (*Prerequisite: AC 240*)
- AC 330 Cost Accounting (3 crs.)**
Basic cost concepts and cost procedures for manufacturing enterprises are studied. Job order product costing is emphasized. Topics include manufacturing cost-flow concepts, procedure and controls, factory and departmental burden rates, inventory-costing methods. (*Prerequisite: AC 241*)
- AC 340 Intermediate Accounting I (3 crs.)**
Basic accounting principles are reviewed. The income and statement of financial position are reviewed in depth. Cash and temporary investments, receivables, inventories, long-term investments, plant and equipment and intangible assets are studied. (*Prerequisite: AC 241*)
- AC 341 Intermediate Accounting II (3 crs.)**
A continuation of AC 340. Includes such topics as inventory cost procedures, special valuation, estimating procedures, investments (stocks, bonds, land, building and equipment); the acquisition, use of retirement, depreciation and evaluation of equipment; current and long-term liabilities; retained earnings and capital stock. (*Prerequisite: AC 340*)
- AC 345 Auditing (3 crs.)**
The qualifications and professional code of conduct of the auditor are discussed. Attention is then focused upon auditing procedures including the preparation of audit working papers and other steps required in the course of an audit. (*Prerequisite: AC 361*)
- AC 350 Managerial Accounting I (3 crs.)**
This course presents the analysis and interpretation of accounting information: statement of changes in financial position; cost terms, cost-volume-profit relationships; break-even computations; product costing using the job order method; budgeting; responsibility accounting; standard costs; flexible budgets; and cost-behavior patterns. (*Prerequisite: AC 241*)
- AC 353 Managerial Accounting II (3 crs.)**
A continuation of AC 350. Topics include working capital, cash receipts and disbursements, cost accounting; period vs. product; fixed vs. variable; controllable vs. non-controllable; job order vs. process; joint products vs. by-products; variable analysis and break-even analysis. (*Prerequisite: AC 350*)
- AC 360 Advanced Accounting I (3 crs.)**
A detailed study of partnerships and corporations including business combinations and segmental reporting of business entities. (*Prerequisite: AC 341*)
- AC 361 Advanced Accounting II (3 crs.)**
A continuation of AC 360 with emphasis on multi-national companies, bankruptcy, installment and consignment sales and accounting for non-profit entities. (*Prerequisite: AC 360*)
- AC 492 Accounting Seminar (3 crs.)**
An advanced-level accounting course involving the discussion of specialized areas of accounting not previously covered. Detailed analysis of accounting releases and areas of special interest, augmented by visiting lecturers. (*Prerequisite: AC 345*)

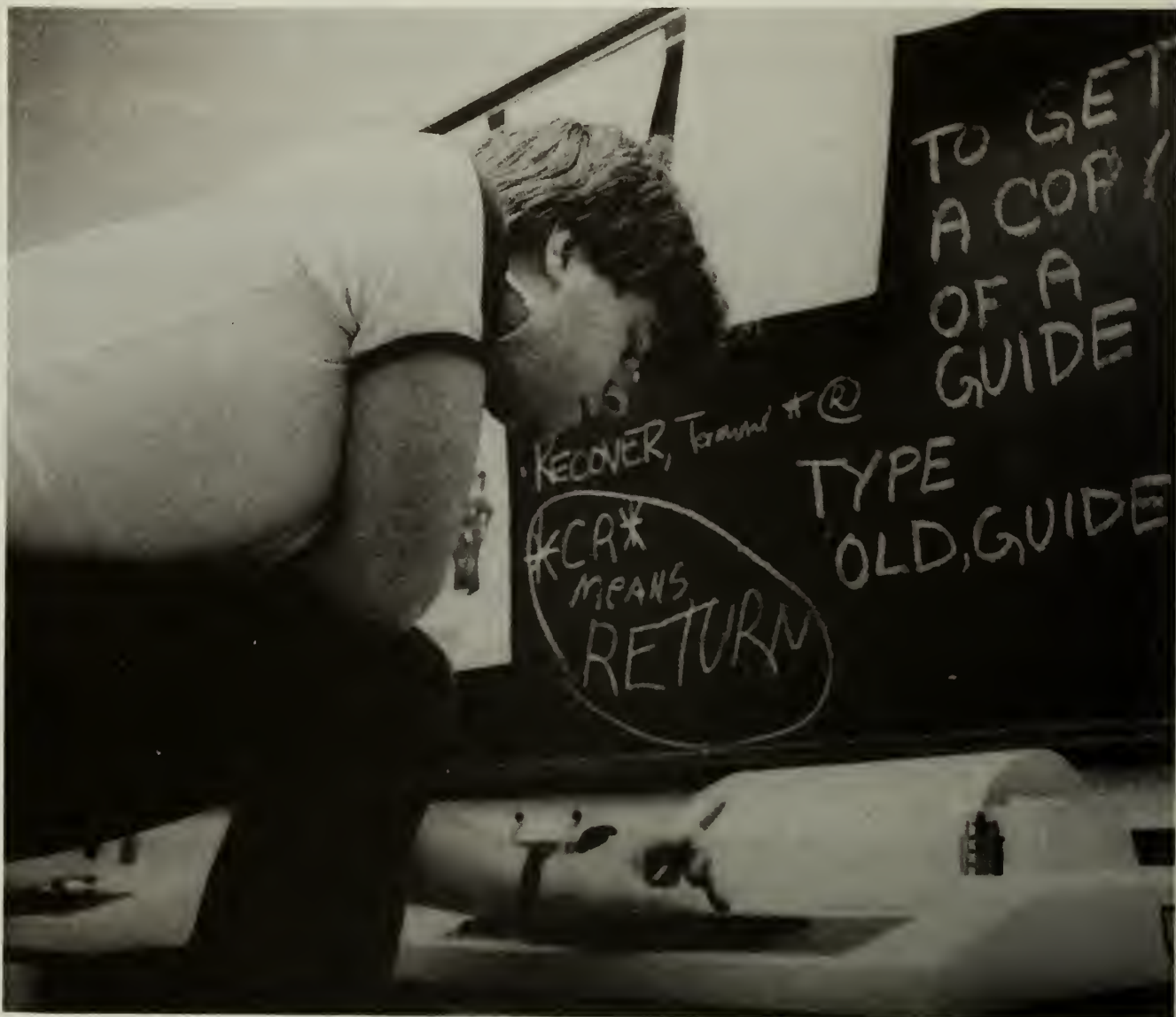
Management Science and Aviation Science

AC 498 Internship in Accounting (3-15 crs.)

A non-classroom experience designed for a limited number of junior and senior majors to complement their academic preparation. (*Prerequisite: Consent of the Department Chairperson; Formal application required*)

AC 499 Directed Study in Accounting (1-3 crs.)

Open to junior and senior majors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department; Formal application required*)



Information Systems Management is one of six Management Science concentrations

Management Science and Aviation Science

AVIATION SCIENCE

- AS 101 Primary Flight I (1 cr.)**
This course consists of flight instruction and ground tutoring necessary for the student to accomplish his or her first solo flight. Lessons include elements of flight principles, pre-and-post flight procedures, taxiing and ground handling, use of flight controls, basic maneuvers, take-offs and landings. Introduction to aircraft systems, radio communications, and air traffic control procedures. One two-hour lecture/demonstration period weekly for one quarter.
- AS 102 Primary Flight II (1 cr.)**
This course is a continuation of Primary Flight I, designed to prepare the student for solo cross-country flight. Lessons provided greater proficiency in maneuvers, stalls, take-offs and landings, and emergency procedures. Introduction to night flight, various types of VFR navigation and VOR tracing. Flight Planning, Cross-Country flying culminating in Solo-Cross Country. One two-hour lecture/demonstration period weekly for one quarter. (*Prerequisite: AS 101*)
- AS 103 Primary Flight III (1 cr.)**
Continuation of Primary Flight II with emphasis on cross-country navigation, flying, flight planning, and solo practice to gain proficiency in all basic maneuvers. Lessons include VFR radio and navigation control of aircraft solely by reference to instruments. Private Pilot qualifications are completed. One two-hour lecture/demonstration period weekly for one quarter. (*Prerequisite: AS 102*)
- AS 105 Air Science and Navigation (4 crs.)**
Private Pilot Ground School. Topics include basic performance and aerodynamics of the airplane, airplane structure and systems, flight control and instruments, weight and balance, airports, communications, air traffic control, meteorology, Federal Aviation Regulations, aeronautical charts, airspace, radio navigation including VOR, DME, ADF, radar and transponderse, A.I.M. Use of the flight computer and cross-country flight planning and medical factors of flight. Leads to the FAA Private Pilot written examination. Meets four hours per week for one semester.
- AS 201 Commercial Flight I (1 cr.)**
This course is the first in the professional pilot training series. Lessons include a review of basic flight maneuvers, instructions and solo proficiency practice in advanced maneuvers, precision landings, take-off and landing techniques. Introduction to altitude instrument flying. One two-hour lecture/demonstration period weekly for one quarter. (*Prerequisite: AS 103*)
- AS 202 Commercial Flight II (3 crs.)**
Concentrated instruction and solo practice in precision flight maneuvers. Introduction to flight in complex aircraft, experience in night and cross-country flying. One six-hour lecture/demonstration period weekly for one quarter. (*Prerequisite: AS 201*)
- AS 203 Commercial Flight III (2 crs.)**
Review and practice of basic and advanced flight maneuvers. Concentrated instrument flight instruction including IFR navigation, use of VOR, ADF, localizer, holding patterns, flight planning, procedures and regulations. One four-hour lecture/demonstration period weekly for one quarter. (*Prerequisite: AS 202*)
- AS 204 Commercial Flight IV (2 crs.)**
Review and practice of precision maneuvers. Continued instrument flight instruction with emphasis on aircraft control, IFR flight planning, departure, enroute, holding, and arrival procedures, instrument approaches, IFR procedures and regulations. One four-hour lecture/demonstration period weekly for one quarter. (*Prerequisite: AS 203*)
- AS 205 Commercial Flight V (1 cr.)**
This course is the final stage of the Commercial-Instrument Series, consisting of a complete review of all commercial maneuvers, instrument flying techniques, procedures, and regulations. Course culminates in recommendation for the FAA Commercial/Instrument Flight Test. One two-hour lecture/demonstration period weekly for one quarter. (*Prerequisite: AS 204, 211, 212*)

Management Science and Aviation Science

- AS 211 Advanced Air Science and Navigation I (3 crs.)**
Part I of the Commercial-Instrument Pilot Ground School. Subject matter involves advanced treatment of the airplane systems, performance and control, the National Airspace System, Federal Aviation regulations, meteorology, radio navigation, and the physiology of flight. Three lectures weekly. (*Prerequisite: AS 105*)
- AS 212 Advanced Air Science and Navigation II (3 crs.)**
Part II of the Commercial-Instrument Pilot Ground School, leading to the FAA Commercial Pilot and Instrument Rating written exams. Topics include discussion of aircraft environmental control systems and commercial flight planning. Study of instrument flight charts, IFR departure, enroute, and approach procedures. FAR's, IFR Flight Planning. Three lectures weekly. (*Prerequisite: AS 211*)
- AS 301 Instructional Flight I (2 crs.)**
This course is the first stage of instruction to the Certified Flight Instructor Certification. Lessons include analysis of flight maneuvers, take-offs, landings, stalls, emergencies, procedures. Practice flight and ground instruction. Two two-hour lecture/demonstration periods weekly for one quarter. (*Prerequisite: AS 205*)
- AS 302 Instructional Flight II (1 cr.)**
Continuation of Instructional Flight I. Lessons include analysis and practice instruction of advance maneuvers, altitude instrument flying, considerations of night flight, aircraft performance and control, spins, cross-country flight and navigation. Leads to certification by the FAA. One two-hour lecture/demonstration period weekly for one quarter. (*Prerequisite: AS 301, 303 -- may be taken concurrently*)
- AS 303 Principles of Flight Instruction (1 cr.)**
This course is designed to provide aviation instructors with easily understood information on learning and teaching, and to relate this information to their task of conveying aeronautical knowledge and skills to students. Topics include aspects of human behavior, teaching methods and communication, evaluation and criticism, instructional planning, instructor characteristics and responsibilities. One two-hour lecture/demonstration period weekly for one quarter. (*Prerequisite: AS 205*)
- AS 305 Introduction to Aviation Management (3 crs.)**
Survey of general aviation industry; basics of aircraft operations; marketing of products and services; legal aspects; physical facilities; major concentration will be placed on management and administration of a fixed base operation, duties and responsibilities of the airport manager and managerial considerations in all areas of general aviation. Three lectures weekly. (*Prerequisite: MG 130*)
- AS 306 General Aviation Operations (3 crs.)**
This course is a combination of lecture and laboratory. Lectures deal with facilities, management finance, legal and insurance aspects of general aviation. Laboratory sessions focus on sales, line service, air taxi, and flight school. One or more field trips to general aviation operations will be held. A semester project is required. One four-hour lecture/laboratory period weekly. (*Prerequisite: AS 305*)
- AS 307 Air Transportation (3 crs.)**
This course covers development, regulation and administration of air transportation, economic information on airlines, alternate transportation modes and their effect on air transportation, contemporary problems of route congestion, pollution aspects, terminal capacity, ground support, changing trends in air freight, and new developments in air transportation regulations. Three lectures weekly. (*Prerequisite: MG 130*)
- AS 308 Airline Operations (3 crs.)**
An in-depth study of U.S. air carrier operations. The economics, organization, and regulation of domestic air carriers are covered in detail. Field trips to the operational sites of major carriers. Air carrier training programs are explored in this course. Three lectures weekly. (*Prerequisite: AS 305*)
- AS 402 Insurance and Legal Aspects of Business Aviation (3 crs.)**
An in-depth study of U.S. and international laws governing aviation. A survey of appropriate risk management policies of aviation. The case method is employed to present practical applications of principles under consideration. Three lectures weekly.
- AS 407 Marketing Management (3 crs.)**
Selling and pricing business aviation services and creative marketing strategy are studied in an analytical approach to advertising, sales force administration, promotion, distribution, retailing, logistics, wholesaling, product planning, price policies, market research, and consumer behavior. Three lectures weekly.

Department of Mathematics and Computer Science

Chairperson: Professor Murray Abramson
Professors: Hugo D'Alarcao, George Sethares
Associate Professors: Robert Bent, Zon-I Chang,
Joseph Chiccarelli, Walter Gleason, Frank Lambiase,
Robert Lemos, Henry Mailloux,
Michael Makokian, John R. Nee, Jean M. Prendergast
Assistant Professors: Mei-Ling Ting Lee, Torben Lorenzen,
Thomas Moore, Richard Quindley, I. Philip Scalisi,
Donald Simpson, Robert Sutherland

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS/BACHELOR OF SCIENCE

Since mathematics is both a cultural and a technical field of study, the curriculum is planned with the following objectives:

- 1) to introduce students to mathematics as an important area of human thought;
- 2) to prepare students for careers in industry;
- 3) to prepare students planning to teach mathematics on the secondary level;
- 4) to serve the needs of students in fields which rely on mathematics, e.g., experimental sciences, social sciences, and elementary education;
- 5) to give preparation to students for graduate study in Mathematics and related fields.

BACHELOR OF ARTS/BACHELOR OF SCIENCE IN COMPUTER SCIENCE

This program provides a broad background in computer science and will serve as preparation for employment in computer applications or for graduate studies in the field.

The department participates in a number of multidisciplinary programs for students preparing for careers in medicine, dentistry, or oceanography. Additional information on these programs may be found in the section *Undergraduate Multidisciplinary and Pre-Professional Programs*.

MATHEMATICS MAJOR

All majors are required to take MA 101-102, MA 201-202, MA 301, MA 401 and one course in computer programming.

In addition to these requirements, elective courses are to be selected as follows:

1. For students preparing for careers in industry, a *minimum of five* courses must be taken from groups A, B, C, or D. The Department recommends a distribution as follows: two electives each from groups B and D and one elective from any of the four groups.
2. For students preparing for secondary school teaching careers, MA 200 is *required* and a *minimum of four* courses must be taken from groups A, B, C, or D. The Department recommends a distribution as follows: one elective each from groups A, B, and C and one elective from any of the four groups.
3. For students planning graduate study, MA 302 and MA 402 are strongly recommended.
Group A: MA 302, MA 303, MA 349, MA 406
Group B: MA 316, MA 317, MA 402, MA 415, MA 416, MA 417
Group C: MA 304, MA 325, MA 326, MA 408
Group D: MA 382, MA 399, MA 403, MA 412, MA 490

All majors must also successfully complete PH 243-244 and a one-year sequence of language study at the intermediate level, or its equivalent. A math major beginning a new foreign language is required to take only six hours of that language.

Mathematics & Computer Science

Students who are contemplating majoring in mathematics or computer science should be aware of the sequential nature of the course offerings. It is of prime importance that students consult with the Chairperson of the Department as soon as possible. This will enable them to plan their programs so that degree requirements may be completed within a four-year period.

COMPUTER SCIENCE MAJOR

All majors are required to take CS 101, CS 102, CS 201, CS 205, CS 206, CS 210, CS 330, CS 340, and CS 350. At least three electives (9 semester hours) must be selected from CS 211, CS 280, CS 325, CS 395, CS 410, CS 420, CS 435, CS 480, CS 498, MA 382 or MA 415.

All majors must also take MA 103, MA 104, MA 200, MA 223 and a one-year sequence of language study at the intermediate level or its equivalent. A computer science major beginning a new foreign language is required to take only six hours of that language.

MATHEMATICS MINOR

A minimum of eighteen hours is required. The student must take:

- (1) MA 101-102 or MA 103-104 or MA 220
- (2) At least one course selected from MA 202 or MA 223; MA 214 or MA 301
- (3) At least three courses selected from MA 105, MA 107, MA 108, MA 110, MA 111, MA 214, MA 216, MA 223, MA 321, or any of the courses in the elective Groups A, B, C, D for mathematics majors.

No more than two courses selected from MA 101 through MA 108 inclusive may be used for the minor.

COMPUTER SCIENCE MINOR

CS 101, CS 102, CS 201, and three additional courses.

These three additional courses to be selected from the following list of courses: MA 200, PH 392, and any other CS courses which are approved for majors.

DATA PROCESSING MINOR

CS 101, CS 210, CS 211 and three additional CS courses which are approved for majors.

GRADUATE PROGRAMS

MASTER OF ARTS IN TEACHING

The department offers a program leading to the degree of Master of Arts in Teaching with a concentration in mathematics, which is designed primarily to meet the varied needs of graduate students who are currently teaching at the secondary school level. Admission to the graduate program requires a minimum of 18 credits of undergraduate mathematics or the approval of the Chairperson of the Department. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult the Graduate School section of this catalogue), and a minimum of 18 appropriate graduate credits in mathematics (approved by the program advisor on the basis of the background, interests, and needs of the student).

The departmental offerings listed below include the following courses which may not be used in fulfillment of the department's M.A.T. degree requirements: any 100 and 200 level courses, MA 321, MA 354, MA 450, MA 492, MA 493, MA 499 and all CS courses.

Mathematics & Computer Science

COURSE OFFERINGS*

MATHEMATICS

- MA 100 Mathematics Review (0 crs.)**
Fundamental principles of algebra and geometry including: signed numbers, fractions, exponents, equations, inequalities, and problem solving.
- MA 101, 102 Calculus with Analytic Geometry I-II (4 crs. for each semester)**
Inequalities, functions and their graphs, the line and linear inequalities, limits and continuity, differentiation of algebraic functions and applications. The definite integral and applications, analytic geometry of the conic sections, the trigonometric and exponential functions, parametric equations and polar coordinates, calculus of vectors in a plane. Required of all freshman candidates for a degree in Mathematics, Physics, or Chemistry. Open to other qualified freshmen with consent of the Department Chairperson.
- MA 103, 104 Mathematical Analysis I-II (3 crs. for each semester)**
Sets, algebraic functions and their graphs, topics from algebra, trigonometric functions and analytic trigonometry, logarithmic and exponential functions, analytic geometry of the line and conic sections, differentiation and integration of algebraic functions and their applications. Required of all freshmen candidates for a degree in Biology or Earth Sciences.
- MA 105 Topics in Mathematics (3 crs.)**
Topics to be selected from: elementary logic, number theory, geometry, algebra and finite mathematics. Recommended for Liberal Arts majors.
- MA 106 Fundamentals of Mathematics (3 crs.)**
Linear and quadratic equations, functions and their graphs, trigonometry, analytic geometry of the straight line and conic sections.
- MA 107, 108 College Mathematics for Elementary Majors I-II (3 crs. for each semester)**
Theory of sets, relations and their properties, systems of numeration, axiomatic approach to the real number system through a study of the integers and rational numbers, elementary number theory, nonmetric and analytic geometry, groups, linear equations and inequalities, probability.
- MA 109 Pre-Calculus Mathematics (3 crs.)**
Brief review of exponents and factoring. Introduction to elementary functions, polynomial functions, rational functions, trigonometric functions, analytic geometry of the straight line and of the conic sections, exponential and logarithmic functions.
- MA 110 Elementary Statistics I (3 crs.)**
Variance, covariance, linear correlation, general regression lines, introduction to sampling theory; and the following distributions: normal, t, chi-square, and F.
- MA 111 Elementary Statistics II (3 crs.)**
The continuation of topics in MA 110. The College's computer facilities may be used in the course. (Prerequisite: MA 110)
- MA 200 Probability and Statistics (3 crs.)**
Basic concepts in probability and statistics including sample spaces, random variables, binomial and other probability distributions, method of least squares, estimation of parameters, goodness of fit tests, and sampling. The emphasis will be on the results of probability and statistics as useful tools for the computer science student. A computer statistical package will be used in the course. (Prerequisite: MA 102 or MA 104)
- MA 201 Calculus with Analytic Geometry III (4 crs.)**
Methods of integration and applications, solid analytic geometry, calculus of vectors in space, elements of infinite series, partial differentiation, multiple integration. (Prerequisite: MA 102)

*See page 68 for general information regarding course offerings

Mathematics & Computer Science

- MA 202 Linear Algebra (4 crs.)**
Vectors, spaces, linear transformations, and matrices.
- MA 214 Introduction to Modern Algebra (3 crs.)**
Linear congruences, groups, matrices, and linear systems. (*Prerequisite: MA 105 or MA 106 or MA 108 or permission of the Department*)
- MA 216 Analytic Geometry (3 crs.)**
Trigonometric functions and analytic trigonometry, analytic geometry of the straight line and conic sections. (*Prerequisite: MA 105 or MA 106 or MA 108 or permission of the Department*)
- MA 220 Introduction to Calculus (3 crs.)**
Functions and limits, derivatives and antiderivatives; the definite integral, differentiation of algebraic and transcendental functions, applications. Mathematics elective for non-science majors. (*Prerequisite: MA 105 or MA 106 or MA 108 or permission of the Department*)
- MA 223 Introduction to Linear Algebra (3 crs.)**
Matrices, determinants, vectors, systems of linear equations. (*Prerequisite: MA 104 or MA 105 or MA 106 or MA 108 or permission of the Department*)
- MA 230 Business Mathematics (3 crs.)**
The mathematics of: financial planning, simple and compound interest, discount (simple, trade, and commercial), depreciation, government revenue collecting, installment payment plans, annuities, amortization of debts, sinking funds. An introduction to statistics, probability and stocks and bonds. Does not satisfy GER.
- MA 301 Abstract Algebra (3 crs.)**
Introduction to the theory of rings, integral domains and fields through a study of integers, rational numbers, real numbers, complex numbers and polynomial; elementary group theory. (*Prerequisite: Permission of the Department*)
- MA 302 Abstract Algebra II (3 crs.)**
Group theory, linear groups, rings and ideals, extensions of rings and fields. (*Prerequisite: MA 301*)
- MA 303 Number Theory (3 crs.)**
Development of the number system, the Euclidean Algorithm and its consequences, theory of congruences, number-theoretic functions, Diophantine equations, quadratic residues. (*Prerequisite: Permission of the Department*)
- MA 304 Higher Geometry (3 crs.)**
Axiomatic systems, finite geometries, introduction to synthetic and analytic projective geometry, affine geometry, non-Euclidean geometry. (*Prerequisite: Permission of the Department*)
- MA 316 Differential Equations (3 crs.)**
Ordinary differential equations of first and second order, linear differential equations with constant coefficients, the Laplace transformation, applications. (*Prerequisite: MA 201*)
- MA 317 Sequences and Series (3 crs.)**
Elementary point-set theory, Heine-Borel theorem, Cauchy sequences, convergence tests for infinite series, absolute convergence, power series, Taylor series and Fourier series. (*Prerequisite: MA 201*)
- MA 318 Quantitative Methods for Management I (3 crs.)**
Selected mathematical tools and techniques for analysis of business and economic problems as an aid to decision-making in management. Models and applications related to decision theory, linear programming, inventory, queuing, forecasting and other standard qualitative concepts. (*Prerequisite: MA 104, MA 110 or equivalent*)
- MA 321 Introduction to Probability (3 crs.)**
Permutations and combinations, finite sample spaces, random variables, binomial distributions, statistical applications. (*Prerequisite: MA 105 or MA 106 or MA 108 or permission of the Department*)

Mathematics & Computer Science

- MA 325 Foundations of Geometry (3 crs.)**
A study of axiomatic systems, finite geometries, axiomatic Euclidean geometry, various non-Euclidean geometries, Klein's Erlangen program, transformation groups, invariant properties. (*Prerequisite: Permission of the Department*)
- MA 326 Projective Geometry (3 crs.)**
The principle of duality, perspectivity, projectivity, harmonic sets, cross ratio, transformation groups, projective theory of conics. (*Prerequisite: Permission of the Department*)
- MA 349 Foundations of Mathematics (3 crs.)**
Elements of set theory and logic, development of the basic number systems, Peano postulates, development of the natural numbers, the integers and rational numbers, real numbers, and Cauchy sequences. (*Prerequisite: Permission of the Department*)
- MA 354 Introduction to Modern Geometry (3 crs.)**
Plane geometric figures, curves and surfaces, congruence, measures, coordinate geometry, parallelism and similarity, non-Euclidean geometries. (*Prerequisite: MA 107*)
- MA 382 Switching Theory (3 crs.)**
Boolean algebra and functions. Combinational and sequential logic lets, threshold logic, minimization theory, completeness theorems. Introduction to Automata theory. (*Prerequisite: MA 301 and CS 101*)
- MA 399 Topics in Advanced Mathematics (3 crs.)**
Special topics selected from the general areas of algebra, analysis, and applied mathematics.
- MA 401 Advanced Calculus I (3 crs.)**
Fundamental theorems on limits and continuity, properties of derivatives, functions of several variables, partial derivatives, multiple integrals. (*Prerequisite: MA 201*)
- MA 402 Advanced Calculus II (3 crs.)**
Sequences, infinite series, power series and expansions of functions, vector calculus. (*Prerequisite: MA 401 or permission of the Department*)
- MA 403 Probability Theory (3 crs.)**
Permutations and combinations, calculus of probabilities, discrete and continuous random variables, expectation, elementary probability distributions, moment-generating functions, samples spaces. (*Prerequisite: MA 201*)
- MA 406 Theory of Sets and Elementary Logic (3 crs.)**
Truth tables, rules of inference, method of proof, the algebra of sets and graphs of functions, cardinal numbers. (*Prerequisite: Permission of the Department*)
- MA 408 History of Mathematics (3 crs.)**
The development of elementary mathematics from ancient to modern time. (*Prerequisite: Permission of the Department*)
- MA 412 Mathematical Statistics (3 crs.)**
Fundamental statistical methods, tests of significance and estimation based on large or small samples, simple correlation, linear regression, statistical inference, sequential analysis. (*Prerequisite: MA 201 or permission of the Department*)
- MA 415 Numerical Analysis (3 crs.)**
Solution of algebraic and transcendental equations, general iteration method, Newton-Raphson method. Approximation of functions and curve fitting, Lagrange interpolation formula, Newton's forward difference method, method of least squares, orthogonality. Numerical integration, Euler-Cauchy technique. (*Prerequisite: MA 201*)
- MA 416 Applied Mathematics (3 crs.)**
Fourier analysis, numerical solutions of ordinary and partial differential equations, integral equations, special functions. (*Prerequisite: MA 316 or permission of the Department*)

Mathematics & Computer Science

- MA 417 Vector Analysis (3 crs.)**
Elementary set theory, vector space theory, inner product spaces, vector algebra, vector differential calculus, differential invariants, integral vector calculus, Stoke's theorem. (*Prerequisite: MA 201*)
- MA 450 Topics in Mathematics for Elementary School Teachers (3 crs.)**
Equations and inequalities; point-set geometry; analytic geometry; measurement (including the metric system); introduction to computer science. (*Prerequisite: MA 107*)
- MA 490 Mathematics Seminar (3 crs.)**
Topics to be selected from algebra, geometry, and analysis. May be offered as a quarter or semester course. (*Prerequisite: MA 201, MA 202, and MA 301 or permission of the Department*)
- MA 499 Directed Study in Mathematics (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Permission of the Department*)
- MA 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- MA 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- MA 507 Topology (3 crs.)**
Elements of point set topology, closed sets and open sets in metric spaces, continuous mappings, connection, separation theorems, and compactness. (*Prerequisite: MA 201 and MA 301 or equivalent*)
- MA 510 Group Theory (3 crs.)**
Groups, subgroups, homomorphisms, normal subgroups and quotient groups, generators, normal structure and the Jordan-Holden Theorem, direct products of groups. (*Prerequisite: MA 301 or equivalent*)
- MA 511 Ring Theory (3 crs.)**
Examples of rings, ideals and homomorphisms, the Jacobson radical, direct sums, Boolean rings, rings with chain conditions. (*Prerequisite: MA 301 or equivalent*)
- MA 518 Topics in Analysis (3 crs.)**
Heine-Borel Theorem, Bolzano-Weierstrass Theorem, topology of the real line, sequences of functions, uniformly continuous functions. (*Prerequisite: MA 401 or permission of the Department*)
- MA 520 Real Analysis (3 crs.)**
Sets and functions, sequences and series, metric spaces, Weierstrass Approximation Theorem, Riemann and Lebesgue Integrals, Fourier Series. (*Prerequisite: MA 401*)
- MA 522 Complex Function Theory (3 crs.)**
Analytic functions of a complex variable, differentiation and integration in the complex plane. Cauchy's theorems, infinite series. Laurent expansions, theory of residues. (*Prerequisite: MA 401*)

COMPUTER SCIENCE

- CS 100 Introduction to Computer Science (3 crs.)**
Computer organization and software. Programming in BASIC. Solution of simple arithmetic and algebraic problems. Elementary data processing techniques. A survey of computer applications in the social sciences and humanities.
- CS 101 Computer Science I (3 crs.)**
A first course in programming. Introductory concepts of computer organization. Problem solving methods and algorithmic development stressing good programming style and documentation.

Mathematics & Computer Science

- CS 102 Computer Science II (3 crs.)**
Advanced programming techniques. Introduction to basic aspects of recursion. In core search and sort methods, simple data structures, subroutines and parameters, and algorithmic analysis. Techniques of algorithmic development and programming will be stressed. The emphasis on good programming style and documentation begun in CS 101 will be continued.
- CS 105 Computers and Their Applications: An Introduction (3 crs.)**
This introductory course includes a discussion of topics selected from: file management, gaming, computer assisted instruction, process control, simulation and modeling. Problem solving using computers with emphasis on analysis, formulation of algorithms and programming. Social implications and the future of computers. Not for students with computer experience.
- CS 200 FORTRAN (3 crs.)**
A problem solving course using FORTRAN language. Structured programming techniques will be emphasized. (*Prerequisite: Proficiency in at least one programming language*)
- CS 201 Assembly Language Programming (3 crs.)**
An introduction to computer architecture and programming systems. Assembly language programming concepts and techniques as they apply to a broad range of computers. The course will emphasize a real computer, such as the PDP/8-I or the H-8 microcomputer system, as opposed to a hypothetical machine. (*Prerequisite: CS 102*)
- CS 205 Discrete Structures in Computer Science (3 crs.)**
This course stresses mathematical concepts commonly applied to algorithmic analysis and data structures. Topics include logic, set theory, inductive definitions and proofs, counting techniques, effective algebraic structures, algebraic flowchart language, structured algorithms, analysis of algorithms, graphs and digraphs, tree structures, and decision trees. (*Prerequisite: CS 102*)
- CS 206 Introduction to Computer Organization (3 crs.)**
Organization and structuring of the major hardware components of computers. Mechanics of information transfer and control within a digital computer system. Fundamentals of logic design. The major emphasis of the course concerns the functions of and communication between the large scale components of a computer system, including properties of I/O devices, controllers, and interrupts. (*Prerequisite: CS 102*)
- CS 210 COBOL Programming I (3 crs.)**
The elements of structured COBOL programming. Topics from among: arithmetic operation statements, report editing, heading lines, comparisons, complex and nested IF statements, single and multiple level control break processing with group indication, one-dimension table processing: subscript, index, table search. (*Prerequisite: Knowledge of at least one programming language*)
- CS 211 COBOL Programming II (3 crs.)**
Continuation of topics of structured COBOL programming. Topics from among: multi-level tables, subprograms, input editing, report writer facility, the sort facility, sequential files, indexed sequential files, and relative files. Creation and file update for sequential and indexed sequential files. (*Prerequisite: CS 210*)
- CS 280 Fundamentals of Microprocessors and Microcomputers (4 crs.)**
Introduction to the binary system, base conversions from decimal to octal, hexadecimal and binary. Use of various gates in building computers and registers. Components of a microcomputer, encoders, decoders, registers, ROM's, RAM's and PLA's. Programming in machine language and OP codes, addressing modes, debugging techniques. Interfacing with peripherals, serial and parallel transmission, maskable and nonmaskable interrupts. A project will be assigned which involves interfacing a microcomputer to an instrument or transducer of some kind.
- CS 325 Programming Language Laboratory (1-3 crs.)**
A specific programming language such as APL, PASCAL, LISP, PL/1 will be covered with each offering of this course. The course may be taken for repeated credit. (*Prerequisite: CS 102 and permission of the Department*)
- CS 330 Data Structures and Algorithms (3 crs.)**
Static, semistatic, and dynamic data structures. Techniques for the analysis and design of efficient algorithms which act on data structures. Topics will include arrays, records, stacks, queues, dequeues, linked lists, trees, graphs, sorting and searching algorithms, algorithms for insertion and deletion, and the analysis and comparison of algorithms. (*Prerequisite: CS 102*)

Mathematics & Computer Science

- CS 340 Organization of Programming Languages (3 crs.)**
Formal study of programming language specification and the comparison of programming languages, especially the run-time behavior of programs. Topics include syntax and basic characteristics of grammars, language constructs for program control and data storage management, and an overview of compilers and interpreters. This course continues the development of problem solution and programming skills introduced in earlier programming courses. (*Prerequisite: CS 201, CS 210*)
- CS 345 Compiler -- Writing Laboratory (3 crs.)**
Compiler structure, lexical analysis, syntax analysis, grammars, description of programming language, automatically constructed recognizers, and error recovery; semantic analysis; semantic languages, semantic processes, optimization techniques, and extendible compilers. Students will write a sample compiler. (*Prerequisite: CS 330 and CS 340*)
- CS 350 Operating Systems and Computer Architecture (3 crs.)**
The organization and architecture of computer systems at the register-transfer and programming levels of system description. Fundamental principles of operating systems and the inter-relationships between operating systems and computer architecture. (*Prerequisite: CS 201*)
- CS 395 Computer Science Seminar (3 crs.)**
Interdisciplinary uses of computers. Problems arising through the increasing use of computers in our society. Seminar will be project oriented and students will present their work to the class for discussion and criticism. (*Prerequisite: A minimum of 24 approved hours in computer science and permission of the Department*)
- CS 405 Data Base Processing (3 crs.)**
Overview of the major data base models and their relative merits. Team analysis and implementation of a data base project. (*Prerequisite: CS 211, CS 330*)
- CS 410 Data Processing Applications (3 crs.)**
A survey of data processing applications of the computer. Students will be assigned large scale projects in such areas as business and public administration. (*Prerequisite: CS 211*)
- CS 420 Minicomputer Laboratory (3 crs.)**
Integrated hardware/software systems design. This is a project oriented course. Students work as teams participating in all phases of a major development project including system specification, subtask descriptions, scheduling, procurement, alternative design evaluation, subsystem development, and system integration. (*Prerequisite: CS 350*)
- CS 435 Analysis of Algorithms (3 crs.)**
General overview of algorithms. Algorithmic techniques needed in problem solving. Relative efficiency of algorithms. Topics will include efficient algorithms for data manipulation, graphical analysis, rapid evaluation of algebraic functions and matrix operations, and $N \log N$ bound in sorting algorithms. (*Prerequisite: CS 330*)
- CS 480 Survey of Programming Languages (3 crs.)**
An overview of selected major programming languages and characteristics that make these languages appropriate for particular classes of problems. The course will contain a brief review of BASIC, FORTRAN, and COBOL and also of other languages such as PASCAL, ALGOL, PL/1, LISP, APL, SNOBOL, GPSS, and SIMSCRIPT. Programming projects in the languages studied are an important part of this course. (*Prerequisite: CS 340*)
- CS 498 Internship in Computer Science (3 crs.)**
Students will work for an employer in the computer science field for a minimum of 10 hours/week during one full semester. A member of the Department will serve as advisor and evaluator of all work projects. *This course can be taken only once for credit.* (*Prerequisite: A minimum of 24 approved hours in computer science and permission of the Department*)
- CS 499 Directed Study in Computer Science (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)

Department of Physics

Chairperson: Professor Richard F. Calusdian
Professors: Grace Healy, Felix S. Palubinskas,
George A. Weygand
Associate Professor: Raymond L. Blanchard

The Department of Physics strives to provide students with the necessary skills and knowledge to pursue successful careers in research, teaching, or further study in graduate programs. Programs in physics culminating in the degrees of Bachelor of Arts, Bachelor of Science, and Master of Arts in Teaching are offered.

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS/BACHELOR OF SCIENCE

The Department of Physics offers a program leading to the Bachelor's degree in Physics. This program is sufficiently flexible to prepare a student for graduate school, industry, or secondary school teaching. Each student can plan a physics program with the help of a faculty advisor, to meet specific future needs.

Students who are contemplating majoring in this department should be aware of the sequential nature of the course offerings. It is of prime importance that such students consult with the Chairperson of the Department as soon as possible. This will enable them to plan their programs so that degree requirements may be completed within a four-year period.

The department participates in a number of multidisciplinary programs for students preparing for careers in medicine, dentistry, or oceanography. Additional information on these programs may be found under *Undergraduate Multidisciplinary and Pre-Professional Programs*.

PHYSICS MAJOR

PH 243-244, 375 or 385, 387, 388, 389, 403; CH 141-142; MA 101-102, 201, 316 or their equivalent; a one-year sequence in foreign language at the intermediate level, or its equivalent.

PHYSICS MINOR

18 credits in Physics acceptable for the physics major.

PHYSICAL SCIENCE MINOR

18 credits in Physics and Chemistry.

COMPUTER ELECTRONICS MINOR

PH 243, PH 244, PH 392, CH/PH 260, CH 396

GEOPHYSICS MINOR

A minor is jointly offered with the Department of Earth Sciences and Geography. For further information contact the department chairpersons.

Physics

GRADUATE PROGRAMS

MASTER OF ARTS IN TEACHING

The Department of Physics offers programs leading to the degree of Master of Arts in Teaching with concentrations in physics and physical sciences. These programs are designed primarily to meet the varied needs of graduate students who are currently teaching at the secondary school level. They also provide a foundation for further graduate work in either of these areas. All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult M.A.T. degree requirements in the Graduate School section of this catalogue), and a minimum of 18 appropriate graduate credits in the major field (approved by the program advisor on the basis of the background, interests, and needs of the student).

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all physics courses at the 100 level, PH 200, PH 202, PH 270, PH 301, PH 390, PH 499.



Physics

COURSE OFFERINGS*

- PH 104 Physical Science for the Elementary School I - Physical Aspects (3 crs.)**
A survey of the physical science concepts included in the elementary school curricula. Content is based upon science materials in several national elementary science curricula including, ESS, SCIS, SAPA, Health and others. Two lecture periods and one two-hour laboratory weekly.
- PH 110 Physics for Nurses (3 crs.)**
Survey of Mechanics, fluid flow, heat, light, electricity and magnetism with applications relevant to students in nursing programs.
- PH 181 Elements of Physics I (3 crs.)**
Principles of mechanics, heat and sound. Two lecture periods and one two-hour laboratory period weekly.
- PH 182 Elements of Physics II (3 crs.)**
Principles of electricity, magnetism, optics and modern physics. Two lecture periods and one two-hour laboratory period weekly. (*Prerequisite: PH 181*)
- PH 191 Engineering Physics I (4 crs.)**
Mechanics, properties of Matter, Fluid Flow, and Heat with applications to engineering. Three lectures weekly; one three-hour lab weekly. (*Prerequisite: MA 101 taken concurrently*)
- PH 192 Engineering Physics II (4 crs.)**
Electricity, magnetism, sound, and optics with engineering applications. Three lecture hours weekly; one hour lab weekly. (*Prerequisite: PH 191; MA 102 taken concurrently*)
- PH 193 Engineering Physics III (3 crs.)**
Electromagnetic waves, physical optics, quantum physics and nuclear physics. Three lecture hours weekly. (*Prerequisite: PH 192; MA 201 taken concurrently*)
- PH 200 Survey of Physics (3 crs.)**
Elements of mechanics, heat, electricity, magnetism, optics and modern physics. Two lecture periods and one two-hour laboratory period weekly.
- PH 202 Modern Physics for the Humanist (3 crs.)**
A study of 20th century man's attempts to understand the laws of nature and his relations to them. Among the topics to be considered are the theory of relativity, elementary particles, nuclear physics and the Manhattan project, quantum theory applications to philosophy and technology.
- PH 243 General Physics I (4 crs.)**
Calculus based study of mechanics and heat. Three lecture periods and one three-hour laboratory period weekly. (*Prerequisite: MA 101 or permission of the Department*)
- PH 244 General Physics II (4 crs.)**
Calculus-based study of electricity, magnetism and light. Three lecture periods and one three-hour laboratory period weekly. (*Prerequisite: PH 243*)
- PH/CH 260 Microprocessors - Microcomputer Technology (4 crs.)**
A study of the electrical families, components and processes used to build the components of microprocessors and microcomputers. An examination of timing cycles for microprocessors with limitations on the digital devices used and the various means in which these components can be assembled in the construction of a microcomputer. Comparison of the various microcomputers available. (*Prerequisite: A college-level course in PH or consent of the Instructor*)

*See page 68 for general information regarding course offerings

Physics

- PH 270 Transportation for the Future - Physical Implications (3 crs.)**
Elements of transportation theory, physical principles and energy considerations. Modern and future vehicle design. Transport systems involving automobiles, monorails, air cushion and air film vehicles, composite and hybrid systems, hydrofoils, hover craft. Future developments in cars, airplanes, ships.
- PH 280 Energy and Its Social Use (3 crs.)**
Energy sources, transmission and consumption of power. Mechanical and electrical energy, solar, wind, hydro-electric, fossil fuel energy versus nuclear energy, fission and fusion energy. Thermodynamic principles and applications. Geothermal energy. Relative efficiencies, entropy and waste energy. Thermal pollution and global equilibrium. Economics of energy.
- PH 291 Engineering Mechanics I (3 crs.)**
The application of vector algebra to the study of the statics of particles and rigid bodies. (*Prerequisite: PH 191 or PH 243; MA 201 taken concurrently*)
- PH 292 Engineering Mechanics II (3 crs.)**
The use of vector calculus and differential equations to the application of problems dealing with the dynamics of particles and rigid bodies. (*Prerequisite: PH 291; MA 316 taken concurrently*)
- PH 301 Physics of Sports (3 crs.)**
A review of required mathematics; the theory and application of classical mechanics to sports. This includes kinematics, dynamics, momentum, work energy, hydrodynamics, and aerodynamics. (*Prerequisite: Six credits in the natural sciences*)
- PH 371 Biophysics, Macroscopic Aspects (3 crs.)**
The structure, function and control of the skeletal, muscular, nervous, blood-vascular and other body systems of the human being on the macroscopic or large-system level. Three lecture periods weekly. (*Prerequisite: Consent of the Instructor*)
- PH 372 Biophysics, Microscopic Aspects (3 crs.)**
The structure, function and control of the human body on the microscopic or molecular level. May be taken independently of PH 371. (*Prerequisite: Consent of the Instructor*)
- PH 375 Wave Theory (3 crs.)**
The mathematics of wave motion; electromagnetic theory and applications to reflection and refraction; superposition of waves; interference and diffraction; Fourier Optics. (*Prerequisite: PH 244, MA 201 or equivalent*)
- PH 376 Electronic Circuits (4 crs.)**
Circuit analysis: Matrix methods, transform methods, amplifiers, feedback theory, operational amplifiers, integrated circuits, analog computers. Three lecture periods and one three-hour laboratory weekly. (*Prerequisite: PH 182 or PH 244 or permission of the Department*)
- PH 381 Thermal Physics (3 crs.)**
Thermodynamics; kinetic theory; and statistical mechanics. (*Prerequisite: PH 243, PH 244*)
- PH 385 Optics (3 crs.)**
Study of geometrical and physical optics. Three lecture periods weekly. (*Prerequisite: PH 244*)
- PH 387 Modern Physics (3 crs.)**
Theory of relativity; atomic structure; quantum theory; nuclear physics and elementary particles. (*Prerequisite: PH 243, PH 244*)
- PH 388 Electricity and Magnetism (4 crs.)**
The theory and applications of the fundamental equations of electromagnetism. Three lecture periods and one three-hour laboratory weekly. (*Prerequisite: PH 244*)
- PH 389 Mechanics (3 crs.)**
Vector treatment of forces, torques; dynamics of particles and rigid bodies; work and energy; momentum; small oscillation theory; Lagrangian and Hamiltonian formulation of dynamics. (*Prerequisite: PH 243*)

Physics

- PH 390 Research Problems in Physics (credit to be arranged)**
Special projects for advanced student desiring individual instruction in the methods of physics research. Hours arranged.
- PH 391 Solid State Physics (3 crs.)**
Crystal structure, electric, magnetic and thermal properties of matter; transport properties; band theory; super conductivity. (*Prerequisite: PH 387*)
- PH 392 Digital Electronics (4 crs.)**
Elements of digital electronics: Boolean algebra of switching circuits, binary logic circuits, digital computer logic circuits. Three lecture periods and one three-hour laboratory weekly. (*Prerequisite: College-level course in physics or permission of the Instructor*)
- PH 393 Special Topics in Modern Physics (3 crs.)**
Topics to be chosen from among the areas of the theory of relativity. Quantum mechanics, Solid State and Nuclear Physics. (*Prerequisite: PH 387*)
- PH 399 Experimental Physics (credit to be arranged)**
Introduction to advanced experimental techniques of physics.
- PH 402 Quantum Mechanics (3 crs.)**
Wave nature of matter; the Schrodinger equation; application of the Schrodinger equation to the electron, the hydrogen atom, multi-electron atoms and radiation. (*Prerequisite: PH 403*)
- PH 403 Mathematical Physics (3 crs.)**
Vector analysis; matrices, linear differential equations; Sturm-Liouville theory; Fourier series; orthogonal functions; Laplace transform. (*Prerequisite: PH 243, PH 244, MA 201*)
- PH 404 Methods of Mathematical Physics (3 crs.)**
Application to physics of topics selected from group theory, generalized functions. Green's functions, complex variable theory, calculus of variations, and tensor analysis. (*Prerequisite: PH 403*)
- PH 405 Nuclear Physics (3 crs.)**
Nuclear forces, nuclear models, nuclear reactions and radioactivity, and elementary particles. (*Prerequisite: PH 387*)
- PH 408 Astrophysics (3 crs.)**
Stellar atmospheres and interiors; generation and transport of energy; stellar evolution, pulsars, blackholes and quasars; galactic structure; cosmology. (*Prerequisite: PH 387 or permission of the Instructor*)
- PH 409 Theory of Relativity (3 crs.)**
The Lorentz Transformation and application to mechanics and electrodynamics; the general Theory of Relativity and application to astrophysics. (*Prerequisite: PH 387*)
- PH 410 Electrodynamics (3 crs.)**
Maxwell's equations in vacuo and material media. Electromagnetic waves. (*Prerequisite: PH 388*)
- PH 411 Procedures in Experimental Physics I (4 crs.)**
Materials of experimental physics, laboratory techniques, instrumentation, analysis of measurements. (*Prerequisite: PH 244*)
- PH 412 Procedures in Experimental Physics II (4 crs.)**
Materials of experimental physics, laboratory techniques, instrumentation, analysis of measurements. (*Prerequisite: PH 411*)
- PH 499 Directed Study in Physics (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)

Physics

- PH 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- PH 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- PH 581 The Physics of the Environment (3 crs.)**
The generation and utilization of energy and their environmental impact. Energy sources included are Solar, Wind, Hydroelectric, Nuclear, Geothermal, Fusion. (*Prerequisite: Permission of the Instructor*)
- PH 583 Physics of the Atom (3 crs.)**
A study of the atomic view of matter and radiation. Topics included are: the kinetic theory of gases, theory of the electron, Bohr's theory of the atom, many electron atoms, theory of molecules and spectra, and the theory of relativity. (*Prerequisite: Permission of the Instructor*)
- PH 584 Physics of the Nucleus and Elementary Particles (3 crs.)**
A study of the nucleus and relationship of elementary particles. The topics included are: nuclear structure, radioactivity, nuclear reactions, nuclear accelerators, conservation laws, symmetry and invariance principles, unified view of the elementary particles, and cosmic rays. (*Prerequisite: Permission of the Instructor*)
- PH 585 Physics of the Solid State (3 crs.)**
A unified treatment of the basic models used to describe solid state phenomena. Topics included are: crystal structure, electric, magnetic, and thermal properties of matter, transport properties of metals and semi-conductors; band theory; super conductivity. (*Prerequisite: Permission of the Instructor*)
- PH 587 Radiation Physics I (3 crs.)**
Wave propagation and the electromagnetic spectrum, interference, polarization, coherence theory, electromagnetic theory. (*Prerequisite: Permission of the Instructor*)
- PH 588 Radiation Physics II (3 crs.)**
Blackbody radiation, photo-electric effect, the Bohr Model of the Atom and Atomic Spectra, the Schrodinger equation and applications to radiation problems. (*Prerequisite: Permission of the Instructor*)
- PH 589 Physics of the Solar System (3 crs.)**
Physical properties and motion of the members of the Solar System and interplanetary medium. (*Prerequisite: Permission of the Instructor*)
- PH 593 Special Topics in Secondary School Science (3 crs.)**
An introduction to the environmental and energy-related physical science topics presented in the Secondary School Science curricula. Special emphasis will be placed upon the science content found in these curricula materials. Lectures, seminars, laboratory work, workshops and model classes will be included in this course. (*Prerequisite: Permission of the Instructor*)
- PH 594 Special Topics in Junior High Science I (6 crs.)**
An introduction to the Junior High School science programs developed by the Princeton Project and by the Educational Research Council of America. Lectures, laboratory work, model classes, and field trips will be included in this course. (*Prerequisite: Permission of the Instructor*)
- PH 595 Special Topics in Junior High Science II (3 crs.)**
A continuation of the course PH 594 in which the Princeton Project and the Educational Research Council's Junior High science programs are studied and evaluated.
- PH 597 Special Topics in Elementary Science (3 crs.)**
An introduction to the elementary science materials developed by the Science Curriculum Improvement Study and others. Special emphasis will be placed upon the study of the science content included in these materials. Lectures, laboratory work, seminars, workshops, and model classes will be included in this course. (*Prerequisite: Permission of the Instructor*)

Division of Professional Education

Educational Services,
Elementary and
Early Childhood Education,
Health, Physical Education,
and Recreation,
High School, Middle School,
and Adult Education,
Media and Librarianship,
Counseling,
School Administration,
CAGS in Education
Ed.D. in School Leadership
and Administration*

Division Coordinator: Dr. L. Stephen Traw

The Division of Professional Education consists of the Departments of Educational Services; Elementary and Early Childhood Education; Health, Physical Education, and Recreation; High School, Middle School, and Adult Education; and Media and Librarianship; the Committees for Counseling and for School Administration; the Burnell Campus School; and the Office of Professional Education Programs.

Through its departments and committees the Division offers undergraduate and graduate programs for the professional preparation of early childhood, elementary, middle, and high school teachers, as well as for specialized positions in school and community-based organizations and agencies. The Division also provides service to the schools, community organizations, and agencies of the region.

The Burnell Campus School provides education majors with practical experiences which complement the theoretical background available in more formal study. Extensive field experiences in schools and agencies off campus further contribute to the development of meaningful linkages between study and practice.

Application for admission to the Teacher Education Program, to student teaching, and for Massachusetts certification are made through the Office of Professional Education Programs.

*Collaborative program with the University of Massachusetts at Amherst

Professional Education

Students following the curricula leading to the Bachelor of Science in Education, when admitted to the Teacher Education Program, are prepared for teaching in pre-school centers or in elementary schools, either as mainstream or special needs teachers, or in physical education. Students majoring in most of the curricula leading to a Bachelor of Arts or Bachelor of Science may minor in High School Education and, when admitted to the Teacher Education Program, are prepared for high school teaching. Graduate degree students seeking teacher certification are eligible for student teaching only after completing a minimum number of applicable program credits and after applying for and being admitted to the Teacher Education Program.

Undergraduate curricula offering degree and/or minor programs are:

Majors in . . .

Early Childhood Education
Elementary Education
Physical Education
Special Education*

Minors in . . .

Health
Instructional Media
Library Science
High School Education with majors in . . .

Anthropology	French
Art	Geography
Biology	History
Chemistry	Mathematics
Communication Arts and Sciences	Physics
Earth Sciences	Psychology
English	Sociology
	Spanish

**Requires double major in either Early Childhood Education or Elementary Education.*

Baccalaureate degree programs having the above majors or minors, with the exception of Library Science and Instructional Media, satisfy the requirements for appropriate Massachusetts teaching certificates, and meet certification requirements of many other states through reciprocity agreements.

Graduate curricula leading to the master's degree and Certificate of Advanced Graduate Study (CAGS) are offered in the following fields:

Graduate Program

Consult Department of . . .

Master of Arts in Teaching

High School, Middle School, and Adult Education (in conjunction with most of the departments outside of Education)

Master of Education in

Special Education
Early Childhood Education
Elementary Education
Elementary School Mathematics
Reading
Health Science
Instructional Media
School Librarianship
Counseling
School Administration

Educational Services
Elementary and Early Childhood Education

Health, Physical Education and Recreation
Media and Librarianship

A description of these Divisional programs follows the Department of Media and Librarianship

Master of Science in

Physical Education
Certificate of Advanced Graduate Study (CAGS) in Education

Health, Physical Education and Recreation
Information about this Divisional program follows the Department of Media and Librarianship

Doctor of Education in School Leadership and Administration

Information about this collaborative program with the University of Massachusetts at Amherst follows the CAGS in Education.

Information on graduate programs leading to Massachusetts certification is found in appropriate department sections.

Professional Education

ADMISSION TO THE TEACHER EDUCATION PROGRAM

The programs in professional education are designed as a series of experiences encompassing theoretical knowledge as well as its practical application through a sequence of field experiences culminating in student teaching. The goal of the program is the graduation of students with outstanding qualifications for teaching or related fields.

All undergraduate and graduate students preparing to teach and whose programs include student teaching and qualifying for teacher certification, must formally apply for, satisfy all selection criteria, and be admitted to a Teacher Education Program. After admission to a program, the student must qualify for retention and for admission to the Student Teaching Practicum by maintaining a status of good standing in relation to the admission criteria and also must satisfy additional criteria, if any, established by his or her respective program. Students must retain the admission criteria and also satisfy additional criteria, if any, established by departments for admission to the student teaching practicum and recommendation for certification.

The following requirements and criteria for admission to a Teacher Education Program and for admission to the Student Teaching Practicum have been established and must be fulfilled by *all* students preparing to teach.

1. The Applicant must submit a medical form completed and signed by a physician to the College Health Service before matriculating.
 2. For compliance with area school policies and with the provisions of Chapter 71, Section 55B of the Acts of 1974 — TB exams for school personnel — the applicant must secure a tuberculin skin test or chest x-ray before working with children in the schools. This is a requirement for an introduction to education course (ED 220, ED 221 EE 220 or EE 230) or any other pre-student teaching field experience, as well as student teaching. The applicant must submit the result to the College Health Office.
 3. The **undergraduate applicant** for a Teacher Education Program must make formal application. The necessary form may be obtained from either the Office of Professional Education Programs, from the appropriate education departments, or, while enrolled in an introduction to education course (ED 220, ED 221, EE 220 or EE 230), from the instructor of the course. The deadline for submitting a completed application is February 1 of the sophomore year, or for the *transfer student* who has completed the sophomore year elsewhere, before the end of his or her first month of classes at Bridgewater State College.
- The **undergraduate student in the Program of Continuing Education**, who is an applicant for a Teacher Education Program, must make formal application by obtaining the necessary form from the Office of Professional Education Programs. The deadline for submitting a completed application is February 1 of the last semester of sophomore status.
- The **graduate student** who is an applicant for a Teacher Education Program must obtain the necessary application form from the Office of Professional Education Programs. The deadline for submitting a completed application for Fall placement is February 1 of the academic year prior to the year in which the Student Teaching eligibility will be certified by the Office of the Graduate School (see below); and September 30 for Spring placement.
4. Admission into an **undergraduate** Teacher Education Program becomes effective when the applicant has been certified as having satisfied all of the admission criteria, but no earlier than at the end of the student's sophomore year.

a. The following criteria have been established as minimum criteria for admission and retention in a Teacher Education Program.

- 1) The undergraduate applicant must be a matriculated student at the College with a minimum Bridgewater State College Q.P.A. of 2.2.
- 2) All entering freshmen and transfer students are required to submit a medical form completed by an appropriate physician. This includes a record of a tuberculin test and/or chest x-ray. A statement confirming that the applicant has met this criterion is sent by the College Health Office to the Office of Professional Education Programs.
- 3) The applicant must show proficiency in written English by submitting to the Office of Professional Education Programs, a transcript of undergraduate work having a mark of B or better in English Composition I (EN 101) or passing marks for English Composition I and II (EN 101 and EN 102), or by obtaining and submitting an equivalent score on a "challenge" or CLEP examination.

Professional Education

4) The applicant must be certified by the Speech Proficiency Committee as having taken a speech proficiency test for the purpose of early diagnosis and recommendation for any identified problem which pertains to having speech that:

is characterized by no apparent articulation disorders; exhibits no phonotory, volume or rate patterns which would draw undue attention or interfere with intelligibility.

Speech proficiency screening is available to all incoming freshmen and transfer students at the beginning of or prior to each academic year, usually at orientation sessions. A certificate of Speech Proficiency is sent by the Speech Proficiency Committee to the Office of Professional Education Programs.

5) All students are required to complete approximately forty contact hours working with children or youth in schools or other agencies as part of an introduction to education course (ED 220, EE 220, or EE 230) or through some other means approved by the appropriate education department chairperson. Certification of the satisfactory completion of this experience requirement is provided by the appropriate education department to the Office of Professional Education Programs.

6) In addition, the following may be considered as constituting a basis for denial of admission or retention: evidence of specific behavior indicating that impairment of physical or mental health will be likely to interfere with satisfactory performance as a future teacher.

b. Any additional criteria may be required by a particular Teacher Education Program to which admission is sought. Any such criteria may be obtained from the appropriate department office.

Announcements of acceptance into a Teacher Education Program will be made upon satisfaction of all criteria.

ADMISSION TO STUDENT TEACHING PRACTICUM

Good standing in relation to the aforementioned admission criteria must be maintained.

A current tuberculin test and/or chest x-ray must be submitted to the College Health Service before placement in the Student Teaching Practicum.

The application form for the Student Teaching Practicum must be filed with the Office of Professional Education Programs by February 1 for placement the following academic year. Students with unusual circumstances may file an application for a Spring placement by September 30 after consultation with the appropriate department.

Students may not carry other courses while student teaching.

Graduate students are reminded that a letter of eligibility must be requested from the Graduate School and forwarded to the Office of Professional Education Programs.

Department of Educational Services

Chairperson and Graduate Program Coordinator:

Professor Marilyn Barry

Associate Professors: Tracy Baldrate,
William Murphy, Paul Prescott

UNDERGRADUATE PROGRAMS

BACHELOR OF SCIENCE IN EDUCATION

The Department of Educational Services offers several programs to meet the needs of undergraduates who are interested in special education, and also in certification as a Teacher of School Age Children with Moderate Special Needs (N-9).

All students planning to pursue a teacher education program of study must apply for admission to and be accepted in the Teacher Education Program. Information on this program may be found in the introductory section of the Division of Professional Education.

Two options are available through which undergraduates may pursue certification as a teacher of school age children with moderate special needs (N-9) while pursuing a baccalaureate degree in either Early Childhood or Elementary Education.

The first option provides for a dual major: Special Education/Early Childhood or Special Education/Elementary Education. Students choosing this option defer graduation at the completion of the four-year program for the baccalaureate degree and complete a student teaching practicum during the first semester of the next academic year. At the end of that time students will have completed a bachelor's degree in either Early Childhood Education or Elementary Education, as well as a program designed to prepare teachers of school age children with moderate special needs (N-9). Students interested in this option should refer to Program A.

The second option provides for a bachelor's degree in either Elementary or Early Childhood Education at Bridgewater State College and a program designed to prepare teachers of school age children with moderate special needs (N-9) (but *not* a special education major). Students choosing this option graduate at the completion of their four-year program for the baccalaureate degree and complete a graduate-level practicum in special education during the first semester of the next academic year. At the end of that time students will have completed a bachelor's degree in either Early Childhood or Elementary Education as well as a program designed to prepare teachers of school age children with moderate special needs (N-9). Students may apply graduate level credits toward a Master of Education in Special Education at a later time. Students interested in this option should refer to Program B.

PROGRAM A

For students who are currently pursuing a bachelor's degree in either Elementary or Early Childhood Education at Bridgewater State College and who wish a dual major in Special Education in order to complete a program designed to prepare Teachers of School Age Children with Moderate Special Needs.

These courses are required during the last semester of the senior year or earlier:

	<i>Credits</i>
SE 400 (U) The Culturally Different Child with Special Needs	3
SE 420 (U) Strategies for Individual Educational Programming	3
.....	

Educational Services

SE 435 (U) Behavioral Interventions in Special Education	3
SE 436 (U) Consulting Skills for Special Education	3
SE 438 (U) Career Education for Special Needs Learners	3
SE 439 (U) Diagnostic Techniques for Special Educators	3
CD 292 (U) Language Acquisition and Development	3

FALL SEMESTER:

SE 491 (U) Practicum: Special Education (N-9)	7½
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Total: 28½ credits

Students completing Program A will have earned a bachelor's degree with a major in Early Childhood or Elementary Education AND Special Education, which will be awarded at the next graduation date.

PROGRAM B

For students who are currently pursuing a bachelor's degree in either Elementary or Early Childhood Education at Bridgewater State College and who wish, without majoring in Special Education, to complete a program designed to prepare Teachers of School Age Children with Moderate Special Needs.

These courses are required during the last semester of the senior year or earlier:

Credits

SE 400 (U) The Culturally Different Child with Special Needs	3
SE 420 (U) Strategies for Individual Educational Programming	3

SE 435 (U) Behavioral Interventions in Special Education	3
SE 436 (U) Consulting Skills for Special Educators	3
SE 438 (U) Career Education for Special Needs Learners	3
SE 439 (U) Diagnostic Techniques for Special Educators	3
CD 292 (U) Language Acquisition and Development	3

FALL SEMESTER (Following completion of bachelor's degree):

SE 591 (G) Practicum - Special Education (N-9)	6
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Total: 27 credits

Students who opt for Program B graduate with a bachelor's degree in either Early Childhood or Elementary Education. Any student who decides to earn a master's degree in Special Education at a later date may transfer not more than fifteen appropriate graduate-level credits into the master's program. All transfer credits are subject to the Graduate School's policies, such as the six-year time limit governing the use of a course.

MINOR IN SPECIAL EDUCATION

SE 211 or SE 212 or SE 213 or SE 214, SE 317, SE 420, plus three courses from the following: SE 400, SE 435, SE 436, SE 438, SE 439, either SE 498 or SE 499.

Educational Services

GRADUATE PROGRAMS

MASTER OF EDUCATION IN SPECIAL EDUCATION

The Department of Educational Services offers several program designed to meet the needs of graduate students who are interested in special education.

Certification Track

Certified classroom teachers interested in certification as a Teacher of School Age Children with Moderate Special Needs (N-9) and a master's degree in Special Education follow a program which has been designed in accordance with Massachusetts Department of Education standards. Since this program is designed for students who already possess a Massachusetts classroom teaching certificate, applicants must file the Graduate School's form "Documentation for Certification Status." Students interested in this program should refer to Program C.

Non-Certification Track

Students interested in a Master of Education in Special Education program which does not lead to certification should refer to Program D.

Emphasis on Special Education - Including a Certification Option

Students who have already earned a master's degree and who wish to study special education (with or without the certification option) as part of a Certificate of Advanced Graduate Study (CAGS) in Education program should refer to Program E.

CERTIFICATE OF ADVANCED GRADUATE STUDY (CAGS)

PROGRAM C

For students certified as Massachusetts classroom teachers who wish to be certified as Teachers of School Age Children with Moderate Special Needs (N-9) and who wish to earn a Master's Degree in Special Education.

All accepted students must enroll under the direction of their advisor in *GS 501 Graduate Program Planning*, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue.

Required Courses in Special Education:

Credits

- SE 510 (G) Exceptional Children in the Schools3
- SE 400 (G) The Culturally Different Child with Special Needs
or
SE 540 (G) Contemporary Issues and Mandates in Bilingual Special Education3
- SE 420 (G) Strategies for Individual Educational Programming3
- SE 435 (G) Behavior Interventions in Special Education
or
SE 542 (G) Behavior Interventions in Bilingual Special Education3
- SE 439 (G) Diagnostic Techniques for Special Educators
or
SE 541 (G) Non-Discriminatory Assessment I3
- SE 517 (G) Development of Thought and Language in Young Children3
- Two electives in special education appropriate to the background and needs of the student and approved by the advisor. (Students completing a concentration in bilingual special education must complete SE 544 and SE 546)6
- SE 591/592 (G) Practicum or Internship - Special Education (N-9)6
or
SE 548/549 (G) Special Education Practicum or Internship (working with bilingual children)6

Sub-total: 30 graduate credits

Upon successful completion of the above sequence, the student will be eligible to apply for certification in Massachusetts as an N-9 Moderate Special Needs Teacher.

ADDITIONAL M.ED. REQUIREMENTS:

- SE 513 (G) Research and Seminar in Special Education3
- ED 520 (G) Psychological Foundations of Education3

Sub-total: 6 graduate credits

Total: minimum of 36 graduate credits

Educational Services

Students completing a concentration in bilingual special education should consult the Department regarding additional course requirements.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: SE 211, 212, 213, 214, 317, 491, 498, and 499.

PROGRAM D

For graduate students interested in Special Education who wish to earn a master's degree (non-certification track) in Special Education. The program does not lead to certification as a Teacher of School Age Children with Moderate Special Needs.

All accepted students must enroll under the direction of their advisor in *GS 501 Graduate Program Planning*, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue.

Required Courses in Special Education: Credits

- SE 510 (G) Exceptional Children in the Schools3
- SE 400 (G) The Culturally Different Child with Special Needs3
- SE 420 (G) Strategies for Individual Educational Programming3
- SE 435 (G) Behavior Interventions in Special Education3
- Students not holding or seeking certification in Special Education must also complete an appropriate practice experience through SE 503 (G) Directed Study3

Sub-total: 12-15 graduate credits

ADDITIONAL M.ED. REQUIREMENTS

- SE 513 (G) Research and Seminar in Special Education3
- ED 520 (G) Psychological Foundations of Education3
- Program Electives: Courses approved by the advisor based upon the student's background and objectives. It should be noted that students without considerable experience in special education will take a number of their electives in the special education area. 15-18

Total: minimum of 36 graduate credits

The departmental offerings listed below include the following courses which may not be taken for graduate credit: SE 211, 212, 213, 214, 317, 491, 498, and 499.

Educational Services

PROGRAM E

For students who have already earned a master's degree and who wish to study special education (with or without the certification option) as part of a Certificate of Advanced Graduate Study (CAGS) in Education program.

All accepted students must enroll under the direction of their advisor in *GS 501 Graduate Program Planning*, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue.

Students who wish to focus on special education within their CAGS program and who do not wish to be certified as a Teacher of School Age Children with Moderate Special Needs work closely with their special education advisor and pursue a course of study which meets their academic and professional objectives. For details, consult the "CAGS in Education" description in the Division of Professional Education section of this catalogue.

CAGS students who wish to focus on special education and complete a program designed to prepare teachers of school age children with moderate special needs pursue the following course of study:

<i>Required Courses in Special Education</i>	<i>Credits</i>
• SE 510 (G) Exceptional Children in the Schools	3
• SE 400 (G) The Culturally Different Child with Special Needs	
or	
SE 540 (G) Contemporary Issues and Mandates in Bilingual Special Education	3
• SE 420 (G) Strategies for Individual Educational Programming	3
• SE 435 (G) Behavior Interventions in Special Education	
or	
SE 542 (G) Behavior Interventions in Bilingual Special Education	3
• SE 439 (G) Diagnostic Techniques for Special Educators	
or	
SE 541 (G) Non-Discriminatory Assessment I	3
• SE 517 (G) Development of Thought and Language in Young Children	3
• Two electives in special education appropriate to the background and needs of the student and approved by the advisor	6
• SE 591/592 (G) Practicum or Internship - Special Education (N-9)	6
or	
SE 548/549 (G) Special Education Practicum or Internship (working with bilingual children)	6

Sub-total: 30 graduate credits

Upon successful completion of the above sequence, the student will be eligible to apply for certification in Massachusetts as an N-9 Moderate Special Needs Teacher.

ADDITIONAL CAGS REQUIREMENTS:

ED 570 (G) CAGS Seminar (taken prior to acceptance)	3
ED 581 (G) CAGS Extern Program	3

For details regarding general CAGS requirements, consult the "CAGS in Education" description in the Division of Professional Education section of this catalogue.

Students completing a concentration in bilingual special education should consult the Department regarding additional course requirements.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: SE 211, 212, 213, 214, 317, 491, 498, and 499.

Educational Services

COURSE OFFERINGS*

- SE 211 The Special Needs Learner in the Pre-School (3 crs.)**
This survey course will enable students to gain knowledge of the special needs learner in different educational settings. Academic work will be reinforced through a minimum of 3 field-based experiences which will help the students develop an awareness of the special needs learner. Emphasis in this course will be on the special needs learner at the pre-school level.
- SE 212 The Special Needs Learner in the Elementary School (3 crs.)**
This survey course will enable students to gain knowledge of the special needs learner in different educational settings. Academic work will be reinforced through a minimum of 3 field-based experiences which will help the students develop an awareness of the special needs learner. Emphasis in this course will be on the special needs learner at the elementary level.
- SE 213 The Special Needs Learner in the Middle School (3 crs.)**
This survey course will enable students to gain knowledge of the special needs learner in different educational settings. Academic work will be reinforced through a minimum of 3 field-based experiences which will help the students develop an awareness of the special needs learner. Emphasis in this course will be on the special needs learner at the middle school level.
- SE 214 The Special Needs Learner in the High School (3 crs.)**
This survey course will enable students to gain knowledge of the special needs learner in different educational settings. Academic work will be reinforced through a minimum of 3 field-based experiences which will help the students develop an awareness of the special needs learner. Emphasis in this course will be on the special needs learner at the high school level.
- SE 317 Teaching Strategies in Mainstreamed Programs (3 crs.)**
This course will enable the student to identify appropriate strategies to effectively educate special needs learners in regular classroom settings. It will provide the bridge between the principles of mainstreaming and its educational implementation by highlighting instructional strategies and curriculum adaptations that are possible within the regular classroom. A field experience is involved. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 410*)
- SE 400 The Culturally Different Child with Special Needs (3 crs.)**
This course will enable the student to develop the necessary competencies for teaching special needs children who are culturally and/or linguistically different. The course will combine psychological, linguistic, anthropological and educational findings with practical guidelines and strategies for instruction. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 415 Methods and Materials for the Academically Talented (3 crs.)**
Emphasis on the identification and placement of gifted pupils in our schools and the related program, enrichment activities, creative development, method and materials, modified curriculum, administration, motivation and treatment of underachievement. (*Prerequisite: PY 100*)
- SE 418 Etiology, Dynamics and Treatment of Children with Behavioral Needs (3 crs.)**
The causes, characteristics, behavioral aspects and accepted syndromes for identification will be emphasized as well as the psychiatric procedures involved. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 420 Strategies for Individual Educational Programming (3 crs.)**
This course is designed to provide students with a comprehensive study of how to evolve and implement appropriate individual education programs (IEP's) consistent with special education laws, regulations, procedures, and assessment of data. Major alternatives instructional strategies with emphasis on the diagnostic-prescriptive model will be addressed in the context of a resource room. (*Prerequisite: PY 100; SE 211 or SE 212 or SE 213 or SE 214; SE 213*)

*See page 68 for general information regarding course offerings

Educational Services

- SE 422 Teaching Strategies for Severe Special Needs (3 crs.)**
Residential schools, collaboratives, and other settings for severe special needs children and youth will be reviewed and teaching strategies for this population will be emphasized. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 428 Rehabilitation and Special Education (3 crs.)**
Review of all of the procedures and processes of helping the mentally retarded, the physically handicapped, the emotionally disturbed, and the multi-handicapped through the medium of rehabilitation services. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 429 Workshop in Special Education (3 crs.)**
The practical aspects of special education techniques will be brought into focus through the use of off-campus facilities. In cooperation with area communities, activities will be carried out to find methods and techniques for utilization in both special needs and mainstream programs.
- SE 435 Behavior Interventions in Special Education (3 crs.)**
This course will focus on the background, basic principles and techniques necessary for effective development of behavior with special needs students. Emphasis will be placed on behavioral procedures that have been found effective for individual and classroom use, including the ability to systematically observe and record student behavior. Other interventions and their applications to special education settings will also be considered. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 436 Consulting Skills for Special Educators (3 crs.)**
This course emphasizes the development of consulting and training skills of the special educator. This will include a survey of the origins and dynamics of consulting techniques which will result in the student being able to work in a variety of settings. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 438 Career Education for Special Needs Learners (3 crs.)**
This course will assist in preparing special educators to understand career educational needs of special needs learners. Students will develop skills in appropriate objective writing and curriculum design in the area of career education for special needs learners. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 439 Diagnostic Techniques for Special Educators (3 crs.)**
This course will prepare students to administer, analyze and interpret standardized tests which are applicable in special needs settings. Consideration will be given to assessing instructional needs appropriate to the age, sex, developmental stage, social, racial and linguistic background of special needs learners. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 440 Identification, Assessment & Development of Individualized Educational Programs (I.E.P.) for Vocational Education (3 crs.)**
The purpose of this course is to identify problems special needs learners may encounter in a vocational education setting. The role and responsibilities of vocational educators in developing individualized educational programs will be covered. Identification and assessment techniques will be thoroughly explored.
- SE 441 Strategies & Methods for Special Needs Students in Vocational Education (3 crs.)**
The goal of this course is to enable the vocational educator to develop competencies in planning and implementing instruction for special needs students in vocational education classes. Techniques for modifying curriculum materials, curriculum content, teaching strategies and the physical environment will be addressed. (*Prerequisite: SE 438*)
- SE 460 Topics in Special Education (3 crs.)**
This course is designed for students who desire to study selected topics in this field; it will allow for timely and relevant information to be explored. Topic changes each semester. (*Prerequisite: SE 212 or SE 213 or SE 214*)

Educational Services

- SE 491 Student Teaching Practicum or Internship (7½ crs.)**
Practicum involves full-time teaching in the role for one quarter under qualified practitioner and college supervisor or a minimum of 150 clock hours in the role for one semester under qualified practitioner and college supervisor, or a minimum of 150 clock hours in the role for two consecutive semesters under qualified practitioner and college supervisor. (*Prerequisite: Unique program guidelines and prerequisites available from program coordinator and/or advisor*)
- SE 498 Internship in Special Education (3-15 crs.)**
Off-campus experiences in areas related to expanding the student's background in Special Education. In-depth exposure to such areas as rehabilitation programs, sheltered workshops, day care centers, hospital and institutional programs. (*Prerequisite: Consent of the Department*)
- SE 499 Directed Study in Special Education (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- SE 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- SE 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- SE 510 Exceptional Children in the Schools (3 crs.)**
An orientation to all aspects of education pertaining to special needs children. Emphasis will be on educational characteristics of each area of exceptionality and the new role of special education in the schools. Chapter 766 and P.L. 94-142 will be included.
- SE 512 Organization and Administration of Special Education (3 crs.)**
A comprehensive study of the psychological diagnosis, the personnel, the curriculum, the facilities, and the pupil services in an effective Special Education program. (*Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 513 Research and Seminar in Special Education (3 crs.)**
A careful research to help determine changes in this field so that improved services and techniques might be realized. (*Prerequisite: At least 30 credits toward the M.Ed. in Special Education*)
- SE 514 New Education Policies for Children with Special Needs (3 crs.)**
The legal basis for the education of children with special needs to help them become accepted, productive and social members of our society. Integration, assessment, delabelization, and involvement declare the real responsibility of all parents/guardians, of all educators, and of all the American public. (*Prerequisite: SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 515 Teacher Orientation to Learning Disabilities (3 crs.)**
Acquaint in-service teachers with current statistics concerning children with Moderate Special Needs and encourage appreciation of the wide spectrum of difficulties these children have. Diagnosis and evaluation will be studied in conjunction with the fields of perceptual handicaps, physiology, neurology, and psychology. (*Prerequisite: PY 224 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 517 Development of Thought and Language in Young Children (3 crs.)**
Basic principles of child growth and language. Language development in the whole child will be complemented and supplemented with a concentration on language disorders, testing and remediation. The influence of developmental (and other) deviations in growth and learning will be considered in understanding language problems. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)

Educational Services

- SE 536 Development of Auditory and Visual Perceptual Skills in Young Children (3 crs.)**
Development of vision and audition as part of a sensory-action system with stress on the interaction between the functional and clinical aspects. Considerable time will be devoted to the recognition of perceptual skills and classroom problems involved in learning and learning difficulties. (*Prerequisite: SE 515, PY 252, or permission of the Instructor*)
- SE 540 Contemporary Issues and Mandates in Bilingual and Special Education (3 crs.)**
Skills will be developed for identifying "special needs" relative to educating children from minority groups using a case study approach. Emphasis will be on the laws (Chapter 766, P.L. 94-142) Lau Guidelines, Chapter 71A, Section 636, Section 504 of P.L. 93-112 and their implications for programming. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 541 Non-Discriminatory Assessment I (3 crs.)**
Skills will be developed for understanding the distinction between cultural differences and true disabilities. Emphasis will be on the linguistic and cultural biases of existing instruments and procedures and how to interpret test data, behavioral observations and informal techniques. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 542 Behavior Interventions in Bilingual Special Education (3 crs.)**
Skills will be developed for understanding how cultural differences affect behavior. The models of behavioral management will include positive peer culture, tribal orientation, cultural symbols, social relations in the classroom, and multicultural techniques in addition to the theories of Erikson, Maslow, and Skinner, and other psychological and cognitive models. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 543 Non-Discriminatory Assessment II (3 crs.)**
Case studies will be utilized for sharing and interpreting test data to other teachers, administrators, parents and consultants as well as including the prescribing of instructional programs from the test data. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510; SE 541*)
- SE 544 Language Development and Bilingualism (3 crs.)**
Skills will be developed for identifying dominance and language proficiency, understanding theories of first and second language learning, relating methods and theories on reading to ESL materials and identifying biases and deficiencies in existing curriculum for linguistic and cultural minority students. Emphasis will be on the effect of culture and language differences on speech and language development. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 545 Individual Education Planning in Bilingual Program Development and Instructional Alternatives (3 crs.)**
Using a case study approach before writing an IEP, identifying child's strengths, weaknesses, learning style, general and specific behavioral goals, emotional, cultural constraints, and the criteria for moving to least restrictive environment, with an emphasis on preventing bilingual children from being referred to special education programs by identifying inadequate services for bilingual children and advocating for change under the mandates of Chapter 766 and Public Law 94-142. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 546 Strategies and Techniques for Adapting Bilingual Resources and Materials for the Special Needs Learner (3 crs.)**
Skills will be developed for organizing, planning, teaching and evaluating materials and programs for cultural/racial/linguistic biases and stereotyping, but with an additional focus on sensitivity to bilingualism and biculturalism. Emphasis will be on developing appropriate materials and strategies for meeting the needs of bilingual children in the classroom, the resource room, or least restrictive environment. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)
- SE 547 Multiple Roles for Bilingual Teachers of Moderate Special Needs Children (3 crs.)**
Skills will be developed for the many roles a change-agent might function in, such as educators, consultants, advocates, liaisons, counselors, advisors and trainers. Emphasis will be on the major role of the Bilingual Special Educator as a change-agent in the school and community to reduce racial discrimination in regular and special education. (*Prerequisite: PY 100 and SE 211 or SE 212 or SE 213 or SE 214 or SE 510*)

Educational Services

SE 548 Special Education Practicum (Working with Bilingual Children) (6 crs.)

Practicum involves full-time teaching in the role for one quarter under qualified practitioner and college supervisor, or a minimum of 150 clock hours in the role for one semester under qualified practitioner and college supervisor, or a minimum of 150 clock hours in the role for two consecutive semesters under qualified practitioner and college supervisor. *(Prerequisite: Unique program guidelines and prerequisites available from program coordinator and/or advisor)*

SE 549 Special Education Internship (Working with Bilingual Children) (6 crs.)

Candidates who do not hold Massachusetts certification as Teachers of School Age Children with Moderate Special Needs and who are employed less than full time, but at least 1/5 time, in the role and at the level of the certificate desired, must complete a 300 clock hour internship within one calendar year. Students must register with the Program Coordinator by May 15th for the Fall semester or by October 15th for the Spring semester. *(Prerequisite: Completion of at least 8 of the 10 required courses in special education, and in some cases, all 10 required courses in special education--depending upon the selected option)*

SE 591 Practicum - Special Education (N-9) (6 crs.)

Practicum involves full-time teaching in the role for one quarter under qualified practitioner and college supervisor, or a minimum of 150 clock hours in the role for one semester under qualified practitioner and college supervisor, or a minimum of 150 clock hours in the role for two consecutive semesters under qualified practitioner and college supervisor. *(Prerequisite: Unique program guidelines and prerequisites available from program coordinator and/or advisor)*

SE 592 Internship - Special Education (N-9) (6 crs.)

Candidates who do not hold Massachusetts certification as Teachers of School Age Children with Moderate Special Needs and who are employed less than full time, but at least 1/5 time, in the role and at the level of the certificate desired, must complete a 300 clock hour internship within one calendar year. Students must register with the Program Coordinator by May 15th for the Fall semester or by October 15th for the Spring semester. *(Prerequisite: Completion of at least 8 of the 10 required courses in special education, and in some cases all 10 required courses in special education--depending upon the selected option)*



May, 1984: Students of the Martha Burnell Campus School of Bridgewater State College hold week-long Olympic Games. Colleen Haughey and Victor LoPiccolo raise the Olympic Torch at ceremonies inaugurating the Games



Department of Elementary and Early Childhood Education

Chairperson and Graduate Program Coordinator:

Professor Wayne F. Dickinson

Professors: Peter Bizinkauskas, Robert Daniel,
Diana Draheim, John Deasy, Ray Harper,
Margery Kranyik, Robert MacCurdy,
Wayne Phillips, Vincent Worden

Associate Professors: Gerald Thornell

Assistant Professors: Judith Deckers, Burton Goldman,
John Jones, Thomas Wolpert

UNDERGRADUATE PROGRAMS

ELEMENTARY EDUCATION

BACHELOR OF SCIENCE IN EDUCATION

The program of study for Elementary Education majors will provide the student with the professional competencies necessary to become an effective elementary education teacher. These competencies include an understanding of how students learn and an ability to use appropriate and varied teaching techniques. A very important part of elementary teacher preparation is the provision for student teaching in actual school situations.

Before students can be placed in a student teaching practicum, they must apply for admission and be accepted in the Teacher Education Program. In addition, the student must have successfully completed the pre-practica field experiences attached to the following courses: EE 220, EE 330, EE 340, EE 350, and SE 212. Students completing the program will be eligible to meet Commonwealth of Massachusetts certification requirements for Teacher of Elementary Education (1-6).

Additional information on the Teacher Education Program may be found in the introductory section of the Division of Professional Education.

EE 220, EE 300, EE 330, EE 340, EE 350, EE 420, EE 460 and EE 470, CC 200, ED 480, EE 492, HI 221, ME 310, PE 320 or PE 465 or HE 482, MA 107, SE 212, SE 317, three credits in Geography as a Social Science, PY 224 or ED 230.

In addition to the above courses, each student, in consultation with a departmental advisor, is required to select 12 hours of course work in one of the following supplemental skill areas:

- reading
- mathematics
- the arts
- science
- health and physical education
- communication

Elementary & Early Childhood Education

EARLY CHILDHOOD EDUCATION

The Department of Elementary Education offers a major in early childhood education which enables the student to prepare for career opportunities with young children from infancy through age eight. Students are provided with professional preparation in understanding stages of child growth and development, curriculum planning, teaching procedures, and program evaluation.

The preschool concentration prepares students in the program for work in day care centers, nursery schools and other preschool child care service agencies.

The kindergarten-primary concentration is designed to meet the needs of students wishing to specialize in kindergarten-primary education, and provides practice teaching experiences in kindergarten and grades one through three.

Students completing the program will be eligible to meet Commonwealth of Massachusetts teacher certification requirements for Teacher of Early Childhood Education (K-3).

EARLY CHILDHOOD EDUCATION

EE 230, EE 300, EE 372, SE 211, SE 317, EE 352, EE 420, EE 462, EE 474, ED 480, EE 492, CC 200, CD 292, CC 400, HI 221, HE 482, ML 310 or ML 453, MA 107, PE 320 or PE 465, PY 224 or 225, ME 310, SO 202, plus —
Preschool Concentration - EE 361, EE 497
Kindergarten-Primary Concentration - EE 370, EE 496

All students in this program must apply for admission and be accepted in the Teacher Education Program. Also, before students can be placed in a student teaching practicum, they must have successfully completed the pre-practica field experiences attached to the following courses: EE 230, EE 370 or EE 361, and SE 211. Additional information on the Teacher Education Program may be found in the introductory section of the Division of Professional Education.

GRADUATE PROGRAMS

The Department of Elementary and Early Childhood Education offers the degree of Master of Education in several areas of study: Elementary Education, Early Childhood Education, Elementary School Mathematics, and Reading. In addition, students may focus on one or more of these areas of study as part of a Certificate of Advanced Graduate Study (CAGS) in Education program; for details, consult the CAGS in Education description in this catalogue.

MASTER OF EDUCATION IN ELEMENTARY EDUCATION

This program is designed for teachers and future teachers of grades one through six. It is flexible enough to meet the needs of those with a background in liberal arts as well as those who have an undergraduate major in elementary education.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. As part of their program, students must satisfactorily complete the following curriculum:

1. Research Methods and Findings: GC 500 Research and Evaluation — 3 graduate credits.
2. Humanistic and Behavioral Studies: Consult *Graduate Program Requirements — Master of Education* in the Graduate School section of this catalogue — 6 graduate credits.
3. Departmental Concentrations: Students must elect one of the following options or concentrations (minimum of 21 graduate credits):

A. Individualized Program of Study

Students who are currently certified in elementary education elect courses in consultation with a program advisor which meet their academic and professional objectives. Students must include in their program EE 450 Elementary School Curriculum and EE 554 Graduate Seminar in Elementary Education.

Elementary & Early Childhood Education

B. Certification Program

This program has been approved by the Massachusetts Department of Education for certification as an Elementary Teacher (1-6). This includes certification reciprocity with signatory states under the Interstate Certification Compact. Graduate students wishing Elementary Teacher Certification (1-6) should notify the Department and their advisor immediately. Application to the Teacher Education Program should be made as soon as course work begins. Graduate students planning to student teach at the Elementary level (EE 492) must first complete 21 graduate credits of approved degree work (or more, as determined by the Department) including the following courses:

GS 501*, EE 330*, EE 340, EE 350*, EE 460 or EE 470, SE 510*, ED 480 or ED 580, EE 450, EE 554 (M.Ed.) or ED 581 (CAGS).

**Includes pre-practica field experience and must be successfully completed before entering the student teaching practicum.*

C. Concentration in Computers in Education

Designed for teachers, administrators, and other K-6 professionals who wish to develop an understanding of and skills in the use and application of computers in education. Students must complete EE 468, EE 578, EE 580, and a minimum of 12 approved credits in areas such as computer science and instructional media.

For additional information relative to the M.Ed. in Elementary Education, students not yet accepted should consult with the program's coordinator.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: EE 220, EE 230, EE 390, EE 420, EE 454, and EE 499.

MASTER OF EDUCATION IN EARLY CHILD- HOOD EDUCATION

This program is designed for persons who wish to pursue an advanced degree in early childhood education (including grades kindergarten through three) in association with careers in public schools, non-public preschools, Head Start Centers, day care centers, and other human service agencies. It is flexible enough to meet the needs of those who have a background in the liberal arts as well as those who have already specialized in early childhood education.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. As part of their program, students must satisfactorily complete the following curriculum:

1. Research Methods and Findings: GC 500 Research and Evaluation — 3 graduate credits.
2. Humanistic and Behavioral Studies: Consult *Graduate Program Requirements — Master of Education* in the Graduate School section of this catalogue — 6 graduate credits.
3. Departmental Requirements: EE 450 Elementary School Curriculum and EE 575 Graduate Seminar in Early Childhood Education — 6 graduate credits.
4. Program Electives: Courses approved by the advisor which meet the academic and professional objectives of the student — 15 or more graduate credits.

This program has been approved by the Massachusetts Department of Education for certification as an Early Childhood Teacher (K-3). This includes certification reciprocity with signatory states under the Interstate Certification Compact. Graduate students wishing Early Childhood certification (K-3) should notify the Department and their advisor immediately. Application to the Teacher Education Program should be made as soon as course work begins. Graduate students planning to student teach at the Early Childhood level must first complete 21 graduate credits of approved degree work (or more, as determined by the Department) including the following courses:

GS 501*, EE 370*, EE 352, EE 372, EE 462, EE 474, EE 450, ED 480 or ED 580, EE 575 (M.Ed.) or EE 581 (CAGS), SE 510*

**Includes pre-practica field experience and must be successfully completed before entering the student teaching practicum.*

For additional information relative to this program, students not yet accepted should consult with the program coordinator.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: EE 220, EE 230, EE 390, EE 420, EE 454, and EE 499.

Elementary & Early Childhood Education

MASTER OF EDUCATION IN ELEMENTARY SCHOOL MATHEMATICS

The Department, in conjunction with the Department of Mathematics, offers a program leading to the degree of Master of Education in Elementary School Mathematics. This program is designed for teachers certified in Elementary Education. All candidates for the degree are required to take a minimum of 21 credits of content courses in mathematics as a *combined* total of undergraduate and graduate work. At least nine of these credits must be taken at the graduate level. A designated member of the Mathematics Department will advise each degree applicant upon entry into the program with regard to the mathematics courses which he or she should take. A permanent advisor to the candidate shall be assigned from the Department of Elementary Education. Degree candidates who have not had at least 6 semester hours of introductory modern mathematics must take MA 107 and/or MA 108 (College Mathematics for Elementary Majors I-II). Candidates must also have taken EE 350 (Methods and Materials in Elementary School Mathematics). It should be noted that these three courses may not be offered as credit toward the minimum 30 credits required for the degree.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. As part of their program, students must satisfactorily complete the following curriculum:

1. Research Methods and Findings: GC 500 Research and Evaluation — 3 graduate credits.
2. Humanistic and Behavioral Studies: Consult *Graduate Program Requirements — Master of Education* in the Graduate School section of this catalogue — 6 graduate credits.
3. Departmental Requirements: EE 351, EE 550, 9 graduate credits in mathematics — 15 graduate credits.
4. Program Electives: Education and/or mathematics courses appropriate to the degree program and approved by the advisor — 6 or more graduate credits.

For additional information relative to this program, students not yet accepted should consult the program coordinator.

The departmental offerings listed below include the following courses which may not be taken for degree credit: EE 220, EE 230, EE 350, EE 420, EE 454, or any student teaching credit.

Elementary & Early Childhood Education

READING SERVICES COMMITTEE

Professors: Bizinkauskas, Deasy,
Dickinson (Committee Coordinator), Draheim
Assistant Professor: Deckers

MASTER OF EDUCATION IN READING

The program is designed to prepare experienced teachers for positions as consulting teachers of reading (kindergarten through grade twelve), and has been approved by the Massachusetts Department of Education. This includes certification reciprocity with signatory states under the Interstate Certification Compact. Only those who have completed one year of successful full-time classroom teaching in an accredited school will be considered for admission to the program. Applicants must file the Graduate School form *Certificate of Teaching*. A minimum of thirty-six approved degree credits is required in this degree program.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. As part of their program, students must satisfactorily complete the following curriculum:

1. Humanistic and Behavioral Studies: Consult *Graduate Program Requirements — Master of Education* in the Graduate School section of this catalogue — 6 graduate credits.
2. Departmental Requirements (which provide the theory, content, and professional practice of the specialty): EE 530, EE 540, EE 541, EE 542, EE 544, and EE 555 — 18 graduate credits.
3. Research Methods and Findings: This program requirement will be met through research components in four of the professional courses listed above (EE 540, EE 541, EE 542, EE 555).
4. Program Electives: Courses in reading and/or related fields, approved by the advisor, which meet the academic and professional objectives of the student — 3, 6 or more graduate credits.
5. Practica in Reading: the equivalent of a half-semester practicum is required for certification as a consulting teacher of reading. Students in this graduate program seeking certification as consulting teachers of reading must fulfill the requirements for clinical and supervisory components of the practicum. The program has several options which have been developed to meet the requirements of state certification while providing for the different professional circumstances of the student. These options should be discussed with the student's advisor — 6-9 graduate credits.
6. Students not seeking certification may substitute appropriate electives for these practica.

For additional information relative to this program, students not yet accepted should consult with the Committee Coordinator of the program.

The departmental offerings listed below include the following courses which may not be taken for graduate degree credit: EE 220, EE 230, EE 330, EE 331, EE 390, EE 420, EE 436, and EE 499.

Elementary & Early Childhood Education

COURSE OFFERINGS*

- EE 100 Effective Reading (2 crs.)**
A developmental course dealing with efficient and effective approaches to reading and studying skills at the college level. Emphasis is placed on reading rate comprehension, skimming, study habits, memory training, testing techniques and vocabulary development. Reading effectiveness is built up through the teaching of thorough previewing, rapid reading, and concise note taking.
- EE 101 Speed Reading (1 cr.)**
A developmental course designed to increase both speed and comprehension in a wide variety of materials. Emphasis is placed on developing a range of reading rates for different purposes. Techniques introduced cover study reading, skimming, and article reading. A semester course meeting three times weekly.
- EE 220 Introduction to Strategies of Teaching (3 crs.)**
Taken by sophomore elementary majors as their first course in professional education. Observation of elementary age children in a classroom setting, opportunity for working with such children, confirmation of the choice of teaching as a career and the beginning of the development of skills needed to be a successful teacher. Students will be apprised of both current issues and problems faced by teachers in the public schools. All types of possible classroom teaching strategies will be presented and discussed fully. In addition to 3 class hours there is a 3 hour block of time per week set aside for field work.
- EE 230 Introduction to Early Childhood Education (3 crs.)**
Survey of Early Childhood Education programs in relation to historical perspectives, philosophical foundations and sociological factors. Students will investigate and evaluate Head Start, Day Care Services, Montessori, Nursery School, Kindergarten and Primary Grades. Opportunities will be provided for field experiences. In addition to three class hours, there is a three-hour block of time per week set aside for field work.
- EE 300 Elementary Art Methods (.5 crs.)**
An introduction to methods and materials in art of the elementary teacher. Art projects typical of those done by children in grades K-6 are produced. Classroom management, bulletin board design, and lesson introduction techniques are explored.
- EE 330 Teaching Reading in the Elementary School (3 crs.)**
A consideration of the teaching/learning process involved in effecting mastery of skills; guiding the transfer of these skills as children read; promoting voluntary, independent reading; and assessing needs and monitoring progress. (*Prerequisite: PY 100*)
- EE 331 Developmental Reading in the Secondary School (3 crs.)**
The techniques used to develop reading skills in the secondary school, evaluation of the modern reading materials available, a study of techniques used to analyze students' reading needs and a survey of administration of reading programs in the secondary school with implications for teachers as well as administrators.
- EE 340 Methods and Materials in Elementary Language Arts (3 crs.)**
Strategies in the elementary school to enhance the communication skills of reading, writing, listening, and speaking through pupil involvement in purposeful communication will be stressed. Special emphasis will be given to the teaching of writing and to the development of thinking skills through questioning. (*Prerequisite: PY 100*)
- EE 350 Methods and Materials in Elementary School Mathematics (3 crs.)**
Examining the purpose and content of the contemporary elementary school mathematics curriculum, this course emphasizes how children learn mathematics, a wide variety of teaching procedures and instructional materials, evaluation techniques for use in the classroom, and pedagogical methodology for individualization. Designed also to create awareness of affective experiences in the teaching/learning process of elementary school mathematics. (*Prerequisite: PY 100 and MA 107*)

*See page 68 for general information regarding course offerings

Elementary & Early Childhood Education

- EE 351 Improving Mathematical Instruction in the Elementary School (3 crs.)**
Appraisal of current mathematics programs, evaluation of individual pupils with a class, consideration of current instructional procedures and materials designed to provide for individual differences. (*Prerequisite: EE 350*)
- EE 352 Methods in Early Childhood Mathematics (3 crs.)**
A methods course in the teaching of mathematics to the 3-8 year old child. Basic psychological structures relating to mathematics and current research on mathematics learning will set the background for investigation and rationalization for what should be taught at this level. Skills in student assessment and teaching strategies will be developed. (*Prerequisite: EE 230*)
- EE 353 Strategies of Teaching Mathematics in the Middle School (3 crs.)**
Designed to present to the participant a view of the current middle school mathematics curriculum, this course shall emphasize how students learn mathematics, appropriate pedagogical and methodological techniques, evaluation procedures for use in the classroom, and techniques for individualization to allow for meaningful learning of mathematical skills and concepts. Emphasis is also placed upon participant awareness of affective as well as cognitive experiences in the middle school mathematics process.
- EE 361 Planning and Programming for Preschool (3 crs.)**
Presentation of a comprehensive view of preschool today including developmental characteristics of young children, planning the environment, programming, licensing, staffing, community involvement, and parent relationships. Opportunities for field observations will be provided. Required for those students wishing to student teach in a preschool setting.
- EE 362 Methods and Materials in Elementary Art (3 crs.)**
The objective of art education, role of the classroom teacher, developmental stages in the creative growth of children; materials, processes, tools and teaching procedures which will foster this growth at the various grade levels; correlation of art with other subject fields and evaluation of student progress.
- EE 370 Kindergarten Theory and Methods (3 crs.)**
The philosophy of modern kindergarten education including exploration of contemporary theories and strategies. Developmental characteristics and learning styles of the young child are studied and related to initial school experiences. Curriculum strategies and materials are examined and evaluated. Opportunities to observe the kindergarten child will be provided. (*Prerequisite: PY 100*)
- EE 371 The Preschool (3 crs.)**
Current emphasis on the schooling of young children in a preschool setting is the direction of this course. The psychological, physical, and emotional norms of this age group are explored. Current materials available to the teacher are examined. Recommended for those interested in the very young preschool and kindergarten teaching. (*Prerequisite: PY 100*)
- EE 372 Success in Beginning Reading (3 crs.)**
A thorough examination of the language and perceptual background that children bring to the learning tasks of kindergarten and grade one; the initial steps in developing reading and writing skills; and the possibilities for the creative uses of these skills in the primary grades.
- EE 373 Helping Children to Write Creatively (3 crs.)**
Conducted in a positive atmosphere of support, encouragement and fun, this practical and intensive course employs a workshop format and is aimed at helping teachers to prepare creatively for a classroom emphasis on writing fluency and skill development. Participants are requested to bring a few favorite selections of children's literature. When offered as a one-week full-time workshop, participants may have until two weeks after the end of workshop sessions to complete course requirements. (*Prerequisite: A Reading or Language Arts course*)
- EE 390 Field Based Practicum (6 crs.)**
Community Public Schools serve as laboratories in which students engage in observation and participation in the teaching/learning process. Through active participation with the cooperating teacher the student will demonstrate an ability to sequence meaningful learning activities for individuals, small groups and total class instruction. The student teacher becomes an integral participant in the school community by gradually assuming the obligations of the classroom teacher. Throughout this experience the cooperating teacher and student teacher engage in a continuous evaluative dialogue which is designed to identify areas of strength and weakness so that alternative strategies might be employed to enhance the student's professional growth. (*Prerequisite: PY 100, EE 220, and acceptance and good standing in Teacher Preparation Program*)

Elementary & Early Childhood Education

- EE 420 Educational Measurement (3 crs.)**
Procedures for developing and evaluating classroom teacher-made tests and a survey of standardized testing practices used in the K-12 program. Emphasis will be placed on the student's intended area and/or level of concentration.
- EE 435 Teaching Study Skills and the Uses of Reading (3 crs.)**
Opportunities open to classroom teachers for promoting voluntary reading through individualized reading, classroom specialties and curricular related research projects. Consideration of the ways in which teachers can guide pupils to apply their basic readings skills as they study content subjects, locating, selecting, organizing information, preparing reports, setting their own purposes for reading.
- EE 436 Remedial Reading Techniques for Classroom Teachers (3 crs.)**
Experience in analyzing learning needs, preparing remedial plans, and providing highly motivated, intensive instruction to overcome specific weaknesses. Testing and tutoring experiences with elementary children. Two lecture and two laboratory periods weekly. (*Prerequisite: EE 330 or SE 336 or permission of the Instructor*)
- EE 441 Methods & Materials in Outdoor Education for the Elementary Teacher (3 crs.)**
New trends and practices in Elementary Curriculum and methods in outdoor education will be explored in a natural setting. Analysis of different approaches to curriculum construction, teaching procedures, integration of material to classroom and school setting will be implemented. Offered only through the Program of Continuing Education.
- EE 442 Methods and Materials in Outdoor Education II (3 crs.)**
A two-phase program including two in-house weekend workshops. The course will deal with the process of individually researching, designing, and developing outdoor education projects for elementary and high school children. An emphasis will be on ocean studies and wilderness experiences.
- EE 450 Elementary School Curriculum (3 crs.)**
Roles of the administrator, the teacher, the parent and the child in the development of the changing curriculum in the elementary school. Use of action research, in-service training, innovations for curriculum improvement, school organizations, team teaching, the non-graded school, individualized instruction, the reevaluation of objectives and democratic values. (*Prerequisite: PY 100*)
- EE 452 Methods and Materials in Elementary Education (3 crs.)**
Effective ways of vitalizing the teaching/learning process through teacher-pupil planning, participation and evaluation. Emphasis on creative teaching and the individualized approach. Materials and strategies are examined in the light of correct issues. (*Prerequisite: PY 100*)
- EE 454 Seminar in Elementary Education (3 crs.)**
A culmination of all professional experiences in preparation for teaching. Included are review and evaluation of current elementary school practices, discussion of professional ethics and school law, professional growth opportunities, procedures for securing a teaching position, and preparation for and the responsibilities of the first teaching position. Open to all senior elementary majors or by permission of the Chairperson.
- EE 455 Drug Education for the Elementary School Teacher (3 crs.)**
Prevention of drug abuse is the chief purpose of the course. How to acquaint elementary teachers with the causes and cure of the problem. A review of current methods and materials in drug education will be featured. Offered only through the Program of Continuing Education.
- EE 456 Current Issues in Elementary Education (3 crs.)**
This course focuses on influential issues in contemporary education. Specific emphasis is placed on the following topics: financial problems; moral and ethical considerations; interplay of educational techniques; the teacher as a person and a professional; the role of the school as a change-agent in society. (*Prerequisite: PY 100 and 9 hours in Education*)
- EE 460 Methods and Materials in Elementary Science (3 crs.)**
Goals of elementary school science instruction and the methods of attaining them through "newer" science programs, problem solving, experimentation, and varied instructional media are examined. (*Prerequisite: PY 100*)

Elementary & Early Childhood Education

- EE 462 Science and Social Studies Methods in Early Childhood (3 crs.)**
The goals of scientific inquiry and responsible citizenship. The establishment of objectives and the selection of appropriate methods, materials, and techniques of planning to meet these objectives. Current trends in the teaching of both science and social studies. Innovative ideas found in the newer programs. (*Prerequisite: PY 100*)
- EE 468 Introduction to Computers for the Elementary School Classroom (3 crs.)**
Designed as a computer literacy course for K-6 pre-service teachers, in-service teachers, and supervisory personnel. The course covers the history, capabilities, and role of computers in education. Early childhood and elementary school applications are explored in a computer laboratory setting. No prior knowledge or experience with computers is assumed.
- EE 470 Methods and Materials in Elementary Social Studies (3 crs.)**
Emphasis is placed on current trends including objectives, curriculum, creative pupil-teacher planning, teaching techniques involving extensive use of instructional media and study tours of New England. (*Prerequisite: PY 100*)
- EE 473 Improving Elementary School Social Studies (3-6 crs.)**
The intent of this course is to develop with the student a series of strategies, affective as well as cognitive, that combines the best elements of the teaching-learning experience in elementary school social studies. The newest trends and practices in social studies curriculum and methodology are explored in a laboratory context.
- EE 474 Methods and Materials in Early Childhood Language Arts (3 crs.)**
Ways of teaching young children with a focus on language arts strategies and materials. Learning theories and methods of individualization stressing the child as a unique individual. Emphasis on classroom organization and the use of innovative teaching techniques. (*Prerequisite: PY 100*)
- EE 475 Seminar in Early Childhood Education (3 crs.)**
Study of problems and issues related to the education of young children. Emphasis will be placed on current research, learning theories, curricular and methodological concerns. Each student will make an extensive study of a significant issue related to Early Childhood Education.
- EE 490 Supervised Teaching in the Elementary School - Art (7½ crs.)**
Supervised experiences in classroom art activities. Experiences gained in teaching techniques, materials, individual differences, and classroom management. Supervision by the cooperating teacher and college supervisor. Full time for one quarter. (*Prerequisite: Acceptance and good standing in Teacher Preparation Program*)
- EE 492 Supervised Teaching in Public Schools - Elementary (7½ or 15 crs.)**
Supervised experiences in classroom activities. Experiences gained in teaching techniques, individual differences and classroom management. Opportunities available in a variety of instructional environments. Supervision by the cooperating teacher and college supervisor. Full time for either one quarter or a full semester. (*Prerequisite: Acceptance and good standing in Teacher Preparation Program*)
- EE 496 Supervised Teaching in Public Schools - Early Childhood (7½ or 15 crs.)**
An eight or fifteen week field experience at the K-2 level under the guidance of a cooperating teacher and a college supervisor. Opportunities for participation in pupil observation, program planning and utilization of contemporary teaching strategies.
- EE 497 Supervised Teaching in Preschool (7½ crs.)**
Supervised student teaching experience in a preschool setting with children, infancy through age five. Emphasis on development, implementation and evaluation of innovative preschool programs. The student participates in a total program, five days a week for eight weeks in either Day Care Center, Nursery School or Head Start Program.
- EE 499 Directed Study in Elementary Education (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- EE 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.

Elementary & Early Childhood Education

- EE 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- EE 530 Enhancing Language Skills in the Classroom (3 crs.)**
The intent of the course will be to: 1. heighten teacher perception of communication potential in the classroom, 2. suggest techniques for the use of language skills as the vehicle in all content areas, 3. assist the teacher in the design of materials to fit special needs of the classroom, 4. aid the teacher in the classroom implementation of the designed materials.
- EE 540 Improving Reading Instruction (3 crs.)**
Classroom practitioners identify behaviors that are demonstrated by good readers, analyze the factors in teaching that effect these behaviors and develop plans for modifying instruction. (*Prerequisite: EE 330, EE 331, or equivalent basic course in the teaching of reading*)
- EE 541 Diagnosis and Correction of Reading Disabilities I (3 crs.)**
Designed to prepare both elementary and secondary remedial reading teachers. Part I of this sequence will emphasize the identification of students with reading difficulties, formal and informal diagnostic procedures, and theories of causation. (*Prerequisite: EE 540 or permission of the Instructor*)
- EE 542 Diagnosis and Correction of Reading Disabilities II (3 crs.)**
In Part II, attention will be focused on the development of remedial plans, provision of highly motivated instruction to overcome indicated weaknesses, and problems encountered in organizing and administering remedial programs. (*Prerequisite: EE 541 or permission of the Instructor*)
- EE 543 Effective Reading Programs (3 crs.)**
Current and evolving practices and programs in the teaching of reading. Teachers, reading specialists and administrators will be helped to develop practical plans for insuring that their own reading programs successfully meet the needs of all their students. (*Prerequisite: 9 graduate credits in reading or permission of the Instructor*)
- EE 544 Seminar in Reading (3 crs.)**
An intensive and in-depth review of major issues in reading education. Current trends and research are examined, and classroom applications are explored through individual and group activities. (*Prerequisite: 18 credits toward the M.Ed. in reading with a minimum of 9 credits in reading, or permission of the Instructor*)
- EE 545 Clinical Practicum in Remedial Reading (6 crs.)**
Qualified graduate students work with school pupils assessing instructional needs, diagnosing learning difficulties, and providing high-intensity, well-motivated instruction. (*Prerequisite: Permission of Advisor*)
- EE 546 Supervisory Practicum in Reading Services (3 crs.)**
Candidates assume a leadership role in a school setting as they assist teachers to plan improvements in reading programs to meet teachers' assessed needs. (*Prerequisite: Permission of Advisor*)
- EE 547 Internship in Reading (3 or 6 crs.)**
Offers qualified graduate students in reading an alternative means of satisfying the practicum requirements for State certification for Consulting Teacher of Reading. (*Prerequisite: Permission of Advisor*)
- EE 549 Reading in the Content Areas (3 crs.)**
Designed in a workshop format to have students use their own textbooks to develop exercises which aid children in processing content print. Vocabulary strategies, directed reading processes, skill acquisition lessons, study guides, and levels of questioning are analyzed and utilized as they apply to the different content material.
- EE 550 Advanced Research Topics in Elementary School Mathematics (3 crs.)**
Students accepted will pursue an individualized program of advanced study and research, focused on a substantive topic pertaining to the elementary school mathematics program, and eventuating in an acceptable documented report. Periodic meetings will be scheduled by the instructor. Each student's program must be approved by the instructor and the department chairperson. (*Prerequisite: Completion of or enrollment in all other required courses in the degree program*)

Elementary & Early Childhood Education

- EE 551 Discovering Science — Current Elementary School Science Programs (3 crs.)**
Provides students with opportunities to explore the philosophy, psychology, materials, and methods of implementation of the inductive programs for elementary science and to participate in a curriculum development process. Most resource materials used originate in current elementary science programs — Elementary Science Study, Science--A Process Approach, and the Science Curriculum Improvement Study. *(Prerequisite: EE 460, EE 462 or permission of the Instructor)*
- EE 553 Community Resources for the Elementary School Teacher (3 crs.)**
Designed to acquaint elementary school teachers with community resources in the area that may help them to meet their goals. A theme will be selected and representatives of agencies that illuminate the theme will contribute. *(Prerequisite: PY 100, Teaching Certificate, or Permission of the Instructor)*
- EE 554 Graduate Seminar in Elementary Education (3 crs.)**
An integration of formal study, current research and personal experience. Each student will make an extensive study of a significant problem in elementary teaching. *(Prerequisite: 21 approved graduate credits with a minimum of 12 credits in elementary education)*
- EE 555 Supervision and Administration of Reading Programs (3 crs.)**
A graduate course designed to provide experiences that will provide for appraisal of the components of a reading program and examine research that suggests strategies in change behavior of teachers. *(Prerequisite: 9 graduate credits in reading)*
- EE 556 Curriculum for the Gifted Child in Elementary Schools (3 crs.)**
New trends and practices in curriculum development to encourage the full development of the gifted are studied. Local, regional, state and national movements are examined. Students study curriculum problems and build a curriculum.
- EE 561 Current Issues in Early Childhood Education (3 crs.)**
Exploration of issues confronting the early childhood educator today. Examination of public policy issues, sex stereotyping, mainstreaming, back-to-basics, parent education, bilingual and multi-ethnic education and family structure.
- EE 562 Early Childhood Curriculum - Ages 2-5 (3 crs.)**
Provides students with opportunities to explore all aspects of preschool and kindergarten program curricula. Course focuses on planning and implementing curriculum in readiness skills, language development and communication arts. Observation and participation field component included.
- EE 563 Early Childhood Curriculum - Ages 5-7 (3 crs.)**
For students interested in planning teaching strategies for primary grades. Course explores language arts, math, science, social sciences and classroom management. Observation and participation field component included.
- EE 564 Administration of Early Childhood Programs (3 crs.)**
Attention is given to administration of various early childhood settings with emphasis on state licensing regulations, staff development, physical planning, budget matters, program evaluation and home-school relationships. Discussions, reading and role playing are used.
- EE 565 Math Anxiety: Theories and Principles of Elementary School Personnel (3 crs.)**
A comprehensive study of mathophobia. The course content, ideas, and materials promote awareness of math anxiety and of those obstacles that math avoidance creates. Emphasis on techniques and strategies in reducing math anxiety for children. For elementary school teachers, administrators, and other interested personnel.
- EE 568 Systematic Training for Effective Teaching (3 crs.)**
Systematic Training for Effective Teaching (STET) is a packaged program designed to help teachers increase effectiveness in motivating, encouraging, communicating, disciplining, leading groups, meeting special needs, and involving parents. STET promotes a democratic classroom environment where choices are clear, discipline is logical, and self-discipline is encouraged. *(Prerequisite: Bachelor's degree and teaching certificate)*

Elementary & Early Childhood Education

- EE 572 Strategies of Teaching Reading in the Middle School (3 crs.)**
Designed to teach the instructional models in reading necessary to aid the middle school child in the acquisition of vocabulary and skill competence. Processes for the guiding of the transfer of these skills to content area reading will be taught. (*Prerequisite: Bachelor's degree and teaching certificate*)
- EE 573 Developing Elementary School Curriculum (3 crs.)**
This course will organize its members into a curriculum committee and will, by democratic group process, prepare an elementary curriculum guide for a specific subject or subject area. Most of the resource materials used in the guide will originate in various current elementary programs. Each participant will receive a copy of the finished guide.
- EE 575 Graduate Seminar in Early Childhood Education (3 crs.)**
A study of problems and issues related to the education of young children. Emphasis will be placed on current research, learning theories, curricular and methodological concerns. Each student will make an extensive study of a significant issue related to Early Childhood Education.
- EE 578 Educational Software Development and Computer Applications I (3 crs.)**
An introduction to computer programming, the BASIC language and LOGO as they relate to the development of educational software. Significant hands-on experience with computers. As a final project, students will develop software for classroom application. (*Prerequisite: EE 468, ED 468, or permission of the Instructor*)
- EE 580 LOGO for the Microcomputer in the Elementary Classroom (3 crs.)**
LOGO is the programming language used by elementary students; one of its primary functions is to develop problem-solving skills. This course provides an overview of the history and philosophy of LOGO, practical application of the language's fundamental ideas, and covers classroom implementation. Designed for K-6 teachers and supervisory personnel. (*Prerequisite: EE 468 or consent of the Instructor*)



Dr. Wayne Phillips of the Department of Elementary and Early Childhood Education with students learning computers.

Department of Health, Physical Education, and Recreation

Chairperson: Associate Professor Paul DuBois

Graduate Program Coordinator:

Professor Catherine Comeau

Professors: Regina Gross, Edward J. Hart,

Joseph Huber, Patricia Phillips, Mary Lou Thornburg

Associate Professors: Edward Braun, Carolyn Cramer,

Robert Frederick, Robert Haslam, Virginia Hogg,

Thomas Knudson, Shirley Krasinski, Harry Lehmann, Hazel Schopp

Assistant Professors: Ann Coakley, Genevieve Fitzpatrick,

Janice Harris, Peter Mazzaferro, Johanne Smith, Joseph Yeskewicz

Instructors: Marcia Anderson, Marjorie Rugen

The Department of Health, Physical Education and Recreation offers both undergraduate and graduate programs in the areas of Health and Physical Education.

At the undergraduate level the department offers a major in Physical Education which leads to a Bachelor of Science or Bachelor of Arts degree, and a Health Minor.

Graduate study offered by the department includes: a program in the area of Health which leads to a Master of Education in Health Science, a program in the area of Physical Education which leads to a Master of Science in Physical Education, and study in the areas of Health and/or Physical Education as part of the CAGS (Certificate of Advanced Graduate Study) in the Division of Professional Education.

The department also offers undergraduate and graduate courses in Health, Physical Education and Recreation available to all students.

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS/BACHELOR OF SCIENCE

The Health, Physical Education and Recreation Department offers the Physical Education major an opportunity to elect his/her area of study from among eight concentrations (areas of specialization) and two Teacher Certification programs in Physical Education and two Teacher Certification programs in Health.

The concentrations which are available have been developed so as to prepare graduates to pursue career opportunities in community-based organizations such as business, industry, agencies and hospitals. These concentrations, which include internships in various settings in the community, have expanded the role of the physical educator and health educator beyond the teaching environment in schools, thus preparing the graduate for new career opportunities.

Health, Physical Education & Recreation

Teacher Certification programs in both Health and Physical Education are also available for those students who wish to teach in the public schools. These students may elect one of the four Teacher Certification programs which are available:

Teacher Certification in Physical Education	K-9 level
Teacher Certification in Physical Education	5-12 level
Teacher Certification in Health	K-9 level
Teacher Certification in Health	5-12 level

PHYSICAL EDUCATION MAJOR

Students majoring in Physical Education must complete a minimum of 121 credits for graduation. This requirement includes the following 24 credit major and cognates:

PE 100, PE 101, PE 117, PE 217, PE 401, 9 physical education activity courses, HE 102, BI 102, BI 280, PY 100 or PY 101.

The remaining credits necessary for completion of the degree include the General Education Requirements and one or more of the following selections:

1. elect from the eight concentrations listed below available to the Physical Education major;
2. elect a Teacher Certification option in Physical Education or Health;
3. develop own individualized program of study (with assistance of advisor);
4. combine the Physical Education major with a major or minor in another discipline;
5. combine several of the above.

ATHLETIC TRAINING CONCENTRATION

Concentrations Available to Physical Education Major:

This concentration, which is an approved National Athletic Trainers Association program, prepares the Physical Education major for careers related to the care and prevention of athletic injuries. The program includes conditioning, preparation for sports participation, rehabilitation programs, and administration of an Athletic Training facility. Practical experience through internship is an important aspect of the program. Since there is limited enrollment based on selection-retention procedure, interested students should consult the department relative to this procedure.

PE 240, PE 324, PE 340, PE 450, PE 498, HE 302, HE 471, SO 202 and a chemistry or physics course.

COACHING CONCENTRATION

This concentration prepares the Physical Education major to apply concepts and principles related to all aspects of coaching, including: the player, team, coach, and administration of athletic programs for youth and adults. Internships are an important aspect of this concentration.

PE 240, PE 414, PE 481, PE 498, two techniques of coaching and two officiating courses, HE 302, CC 200, SO 202.

EXERCISE SCIENCE/ HEALTH FITNESS CONCENTRATION

This concentration prepares students for career opportunities in the area of health and fitness in such settings as industry, hospitals, agencies, education, and human service organizations. Emphasis is on cardiovascular health, which includes: physical health evaluation, graded exercise tests, exercise prescription and physical activity program development. Internships off campus in the settings identified above are an important aspect of this concentration.

PE 201, PE 240, PE 402, PE 403, PE 404, PE 498, CH 125 or CH 131, PY 355, SO 202, HE 471.

HEALTH CONCENTRATION

This program provides the Physical Education major with Health knowledge that, in combination with the Physical Education background, prepares the student for career opportunities that involve both areas as a foundation for health promotion. A Health minor is also available (see information under Health minor).

HE 102, plus four of the following courses: HE 300, HE 301, HE 305, HE 471, HE 474, HE 477, HE 478, HE 480, HE 481

Health, Physical Education & Recreation

MOTOR DEVELOPMENT THERAPY/ADAPTED PHYSICAL EDUCATION CONCENTRATION

This concentration prepares the physical education major to work with children, youths, and adults with special needs. The program focuses on physical education to meet the developmental, sport, dance and leisure time needs of special populations as well as their emotional and social needs. The concentration prepares graduates for career opportunities in rehabilitation centers, clinics, hospitals, social agencies and private and public schools. Opportunities for practical experience are provided through off-campus internships as well as the department's sponsored Children's Physical Developmental Clinic.

PE 324, PE 328, PE 498, PY 224, PY 328, PY 355, PY 370, SE 212 or SE 214.

PHYSICAL EDUCATION FOR ADULTS CONCENTRATION

This concentration prepares the Physical Education major for career opportunities related to physical activity programs for the adult population including senior citizens. It focuses on the needs of this population and the unique contributions that physical education can make to these individuals in a variety of settings. Internships where students work with this age group are an important aspect of this program.

PE 310, PE 324, PE 332, PE 404, PE 498, 3 physical education activity courses (in addition to the major requirement) SO 202, SO 326, PY 310

PHYSICAL EDUCATION FOR THE PREADOLESCENT CHILD CONCENTRATION

Through this concentration the Physical Education major learns about the preadolescent child and the important role of physical education and physical activities in the preadolescent's growth and development. Internships where students work with this age group are an important aspect of this program.

PE 225, PE 324, PE 326, PE 465, PE 485, PE 498, HE 302, PY 225, SO 202, an art and a music course.

RECREATION CONCENTRATION

This concentration provides the Physical Education major with the knowledge and skills to pursue career opportunities that utilize physical education and professional recreation expertise in business, industry, agency or recreational settings. Elective opportunities in challenge and Outward Bound type activities are also available. Internships are an important aspect of this program.

PE 230, PE 332, PE 461, PE 462, PE 498, 2 additional recreational courses approved by the department

TEACHER CERTIFICATION PROGRAMS

Teacher Certification options available through the department are as follows:

Teacher Certification in Health - grades K-9

Prerequisites:

1. Major in any discipline
2. Acceptance in college and department Teacher Preparation Programs
3. Health Concentration or Health Minor for Physical Education majors, or Health Minor for other majors

Required Courses:

HE 102, HE 300, HE 302, HE 305, HE 471, HE 480, HE 482, HE 492, PE 100, BI 102, BI 280, PY 100 or PY 101, SE 212, SO 302, ED 230, ED 480, EE 220, EE 420, and a Communication Arts and Sciences course

Teacher Certification in Health - grades 5-12

Prerequisites:

1. Major in any discipline
2. Acceptance in college and department Teacher Preparation Programs
3. Health Concentration or Health Minor for Physical Education majors, or Health Minor for other majors

Required Courses:

HE 102, HE 200, HE 300, HE 302, HE 305, HE 471, HE 480, HE 492, PE 100, BI 102, BI 280, PY 100 or PY 101, SE 214, SO 302, ED 220, ED 230, ED 370, ED 480, and a Communication Arts and Sciences course

Teacher Certification in Physical Education - grades K-9

Prerequisites:

1. Acceptance in Physical Education major
2. Acceptance in college and department Teacher Preparation Programs

Required Courses:

PE 225, PE 312, PE 324, PE 326, PE 329, PE 390, PE 412, PE 492, HE 302, PY 224, ED 480

Health, Physical Education & Recreation

Teacher Certification in Physical Education - grades 5-12

Prerequisites:

1. Acceptance in Physical Education major
2. Acceptance in college and department Teacher Preparation Programs

Required Courses:

PE 312, PE 324, PE 329, PE 390, PE 412, PE 492, HE 302, PY 226, ED 480, 3 physical education activity courses (in addition to the major requirement)

COACHING MINOR

The coaching minor meets the needs of the coaching profession by providing an opportunity for students to combine the study of coaching with a major in any discipline. This multidisciplinary program approach will prepare the student for coaching related careers in community-based organizations such as youth sports programs, church programs, recreational settings and school settings.

PE 100, PE 101, PE 190, PE 217, PE 240, PE 414, PE 471, PE 499, one methods and techniques course.

HEALTH MINOR

The department offers a Health minor which is open to all undergraduates. The Health minor provides an opportunity for students to combine the study of Health with a major in any discipline. This multidisciplinary program approach will prepare the student for Health-related careers in community-based organizations, such as business, industry, hospitals, agencies that deal with health problems, health promotion, or health services.

HE 102, HE 200, HE 300, HE 400, and 3 additional courses in Health approved by the department

Students who take the Health minor and wish to be certified to teach in public schools refer to the Teacher Certification program information of the department's offerings.

GRADUATE PROGRAMS

The Health, Physical Education and Recreation Department offers programs leading to the degrees of Master of Education in Health Science and Master of Science in Physical Education, as well as a CAGS (Certificate of Advanced Graduate Study) in Education with areas of study in Health and/or Physical Education. For CAGS details, consult the CAGS in Education section of the catalogue.

MASTER OF EDUCATION IN HEALTH SCIENCE

This program is designed for individuals who are currently involved in health-related professions or who seek to prepare for health-related careers in community-based organizations such as business, industry, agencies, hospitals, and voluntary and official health agencies, as well as for inservice teachers.

Applicants who do not possess an adequate background in health and/or related areas will be required to make up course deficiencies. Such background course work will not be applied to the graduate program's minimum credit requirements.

The graduate program of study, involving a minimum of 31 graduate credits, includes:

1. GS 501 Graduate Program Planning (required of all graduate students, see *Graduate Advisors and Program Planning* in the Graduate School section of this catalogue) — 1 graduate credit.
2. Research Methods and Findings: HE 511 Research Methods in Health Science — 3 graduate credits.
3. Humanistic and Behavioral Studies: Consult *Graduate Program Requirements - Master of Education* in the Graduate School section of this catalogue — 6 graduate credits.
4. Program Electives: a minimum of 21 graduate credits appropriate to the degree program and approved by the advisor on the basis of the student's academic and professional background and objectives.

The following courses are the **only** Health courses which may be taken for the Master of Education in Health Science degree: HE 300, HE 301, HE 305, and all 400 and 500 level courses, except HE 492, HE 498, and HE 499.

Health, Physical Education & Recreation

MASTER OF SCIENCE IN PHYSICAL EDUCATION

This program is designed for individuals with an undergraduate major in Physical Education, or its equivalent, who wish to pursue new career directions related to the field in community-based organizations, such as business, industry, agencies, hospitals, and educational settings, or who wish to enhance their undergraduate preparation through advanced study. Several program concentrations are available and are described below.

Individuals who do not have an undergraduate major in Physical Education may meet this prerequisite requirement by completing a prescribed 24 credit undergraduate course sequence in Physical Education in the college day program. Such individuals should consult with the program coordinator.

The graduate program of study, involving a minimum of 31 graduate credits, includes:

1. GS 501 Graduate Program Planning (required for all students, see *Graduate Advisors and Program Planning* in the Graduate School section of this catalogue) — 1 graduate credit.
2. PE 506 Philosophy and Principles of Physical Education — 3 graduate credits.
3. PE 511 Survey of Literature and Research in Physical Education — 3 graduate credits.
4. Program electives: Students must elect (in addition to the above requirements) one of the following options:

A. Individualized Program of Study:

Development of a program of study, in consultation with the program advisor, to meet individual career and educational goals.

B. Concentration in Adapted Physical Education:

PE 484, PE 494, PE 508, PE 595, 3 appropriate electives in the field of psychology and/or special education, and one 3 credit elective, approved by the advisor.

C. Concentration in Human Performance/Health Fitness:

PE 402, PE 404, PE 520, PE 595, two of the following courses - PE 403, PE 503, HE 471, HE 483 - and 3-6 credits of electives.

The course offerings in physical education described below include the following which may not be taken for graduate credit: all courses numbered below 400, PE 415-431, PE 492, PE 498, and PE 499.



Spring, 1984: members of the New England Patriots football team come to Bridgewater State College for weight testing by Exercise Science students. In this photo, LeBaron Carruthers, weight training coach of the New England Patriots, is checked.

Health, Physical Education & Recreation

COURSE OFFERINGS*

HEALTH

- HE 101 Introduction to Health Professions (3 crs.)**
An introduction to the shifting focus of health care delivery from a disease to a wellness orientation. Within the larger context of dynamic and changing health systems, the course aims to identify the role and contributions of a variety of health professions to health promotion.
- HE 102 Health Science (3 crs.)**
Attitudes and practices as they influence effective living; common adult health problems; community health standards and services; special problems of concern in the area of community health.
- HE 200 Principles and Practices of Health Education (3 crs.)**
Selection of content for health courses with emphasis on current trends; analysis of the learning and teaching process as applied to health education. (*Prerequisite: HE 102*)
- HE 300 Current Issues in Health (3 crs.)**
Designed to acquaint the students with current health issues and trends related to the school and community. (*Prerequisite: HE 102*)
- HE 301 Human Sexuality (3 crs.)**
Investigation of latest research relating to human sexual response, sexual attitudes and sexual values. Topics covered will also include homosexuality, masturbation, venereal disease, prostitution, abortion, birth control, premarital and extramarital relations.
- HE 302 First Aid and Safety (2 crs.)**
Practical application of techniques used to care for the suddenly ill or injured. Successful completion will result in American Red Cross certification. Safety principles and practices will also be covered.
- HE/SW 303 Interdisciplinary Approaches to the Delivery of Health Services (3 crs.)**
A wide range of interdisciplinary health team approaches will be analyzed. The field component is observational and will provide insight into the pragmatic realities of a health team. This course will be a first exposure to the theoretical and experiential dynamics of interdisciplinary approaches to delivery of health services. Disciplines involved include social work, health, psychology, nursing and medicine. (*Prerequisite: 6 credits in Health and Social work or Health-related areas*)
- HE 305 Drugs in Society (3 crs.)**
Study of the impact of the environmental and cultural values affecting the drug using population. Views on subculture and alternative life styles and the forces that shape them. Understanding trends of modern treatment facilities and rehabilitation procedures. Emphasis on alternatives to drug use.
- HE 390 Field Based Pre-Practicum — Health Education (3 crs.)**
Designed to provide the student with an introduction to teaching health in an off-campus setting.
- HE 400 Development and Administration of Health Programs (3 crs.)**
Study and analysis of administrative roles and responsibilities associated with the implementation and evaluation of health education programs in various community organizations and agencies within the health system. (*Prerequisite: HE 102, HE 200 or HE 300 or permission of the Instructor for graduate students*)
- HE 450 Health Promotion Strategies (3 crs.)**
Current strategies and techniques for transmitting information will be analyzed. Students will develop and evaluate strategies and techniques for promoting health information and wellness behaviors in a variety of settings. (*Prerequisite: HE 400*)
- HE 471 Nutrition (3 crs.)**
Nutrition and its relation to cultural patterns, dental health, total health and fitness, weight control and purchasing and preparation of food.

*See page 68 for general information regarding course offerings

Health, Physical Education & Recreation

- HE 474 Community Health (3 crs.)**
The history and development of public health programs, the relationships of health departments — local, state and federal — public and private agencies, and the school health program. Problems and principles of the community health programs based on local needs. Designed for classroom teachers, health specialists, and others interested in community health.
- HE 475 Theoretical Basis of Health Instruction (3 crs.)**
Investigation and student utilization of new and innovative teaching techniques. Philosophy and content of health instruction is considered. Learning theories, behavior modification theories, and decision-making exercises will be explored and practiced. (*Prerequisite: 6 credits in Health*)
- HE 477 Environmental Health (3 crs.)**
Study of selected environmental influences, and how they affect health. Proposal and action-oriented suggestions for bringing about change. Understanding pressure tactics, political influences, resistive forces and strategies for dealing with them. Exploration of legal structure, geographical difficulties, priority establishment and safety tolerances.
- HE 478 Consumer Health (3 crs.)**
Course designed to help people make informed decisions regarding their best use of health products and services. Topics to be covered include health insurance, life insurance, credit buying, quacks, patent medicines, fad diets, food buying, criteria for selecting health service, identifying subtleties in advertising and understanding the misconceptions concerning health.
- HE 479 Health Problems (3 crs.)**
Current health problems relating to the school and community will be presented. Topics will be based on needs and interests of class participants. The school's responsibility for education in these areas will be discussed. (*Prerequisite: 6 credits in Health*)
- HE 480 Family Life and Sex Education (3 crs.)**
Professional preparation for teachers of family life and sex education. Determining curriculum, overcoming administrative and parental objections, dealing with specific problems of school-age youth such as birth control, venereal disease, psychological and social aspects of sexuality.
- HE 481 Selected Health Issues (3 crs.)**
Designed to bring to the educator the latest information regarding selected health issues. Three issues will be offered each time the course is given and experts in the field will be brought in to deal with each topic. Given in modular form for 1-3 credits.
- HE 482 Health Education in the Elementary Schools (3 crs.)**
Study of the identification and appraisal of physical, emotional, and social health problems of elementary school children. Focus on teachers' approaches toward health education and the creation of an emotionally, socially and intellectually healthy classroom environment.
- HE 483 Nutrition and Cardiovascular Health (3 crs.)**
This course will deal with the selection of nutritional foods throughout the life cycle with specific emphasis on how cardiovascular health may be maintained and/or improved by proper nutritional practices. (*Prerequisite: One course in nutrition or a scientifically-based course that includes topics of nutrition*)
- HE 484 Death and Dying Education (3 crs.)**
A study of the health issues (physical, emotional and social) related to terminal illness and death.
- HE 492 Practicum in Student Teaching — Health (15 crs.)**
Full-time teaching for one semester with supervision provided by members of the department faculty. (*Prerequisite: Acceptance and good standing in Teacher Preparation Program and satisfactorily completed Department Teacher Preparation Program courses*)
- HE 498 Field Experience in Health (3-15 crs.)**
A field experience offers qualified students the opportunity to gain practical off-campus experience in the area of health. Placements are made in both public and private agencies and are designed to complement a student's concentration or minor in health. (*Prerequisite: Consent of the Department*)

Health, Physical Education & Recreation

- HE 499 Directed Study in Health (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- HE 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- HE 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- HE 508 Health Crisis Intervention (3 crs.)**
Dealing with mental, emotional and social health problems of the individual, the family and society. Exploration of suicide education, death education and psychosomatic illness. Investigation and practice of techniques of aiding the potential suicide; the tripping drug user; the chronic alcoholic; the obese, neurotic, and promiscuous; geriatric problems; and health care availability. Course will consider agency roles in these areas. (*Prerequisite: 6 credits in Health*)
- HE 511 Research Methods in Health Science (3 crs.)**
This course will develop competencies needed to both produce and consume research in Health Science and allied areas. Via the development of a research proposal, students will gain an understanding of such research techniques as problem formulation, literature review, sampling, hypothesis construction, research design, instrumentation, and data analysis.
- HE 512 Humanistic Approach to Drug Education (3 crs.)**
A humanistic approach to drug education with emphasis on: available resources, educational modalities, effecting curriculum change, the communication process, attitudes and values, and teaching methods. Lecturers will include experts from the field of drug education.
- HE 513 Cultural Approaches to Health (3 crs.)**
Anthropological, sociological, psychological and physiological factors related to health behavior of sub-cultured groups. Concerns health knowledge, attitudes, values and behavioral practice of various religious and ethnic groups. (*Prerequisite: 3 credits in Sociology*)
- HE 514 Selected Topics in Environmental Health (3 crs.)**
An in-depth study of important environmental health issues. The topics discussed will provide the information needed to make intelligent decisions regarding critical environmental health problems.
- HE 515 Evaluation of School Health Programs (3 crs.)**
Study of the total school health program. Construction and application of an instrument to determine extent of program. School visitations are included. (*Prerequisite: 12 credits in Health*)

PHYSICAL EDUCATION

- PE 100 Anatomy (3 crs.)**
Includes a fundamental study of the human body and its parts, with special emphasis on bones, muscles, and tissues.
- PE 101 Kinesiology (3 crs.)**
Detailed anatomical and mechanical analyses of fundamental motor skills. (*Prerequisite: PE 100*)
- PE 117 Foundations in the Study of Human Movement (3 crs.)**
An historical study of the development of man and movement will be undertaken with emphasis on the biological, psychological, sociological, cultural and philosophical implications. This course is designed to lay the foundation and provide for the understandings necessary to approach the study of physical education as a discipline in the twentieth century.

Health, Physical Education & Recreation

- ‡PE/CT 180 Creative Dance Group* (1 cr.)**
Open to all students who enjoy composing and performing dances. Several programs are given each year. One three-hour meeting each week, plus additional periods at performance time.
- PE 201 Apprenticeship in Exercise Science/Health Fitness (1 cr.)**
The course is an introductory field-work experience in the design and conduct of preventive and rehabilitative exercise programs. In addition to the class work, the student will observe and assist in the operation and supervision of an established program.
- PE 217 Principles of Motor Learning (3 crs.)**
Introduces the student to the concepts and principles concerned with learning and performance of movement skills.
- PE 220 Expressive Movement (3 crs.)**
Creative exploration of individual and group movement to develop the kinesthetic sense and its artistic use. These movement experiences will help the individual's projection of self in his interaction and communication with others.
- PE 225 Teaching Educational Dance, Games and Gymnastics to Children (3 crs.)**
An introduction to the movement approach to dance, games and gymnastics with emphasis on program content and progression using the thematic approach.
- *PE/CT 226 Creative Dance I (3 crs.)**
The study of dance, as the Art of Movement. Included are basic exercise, individual and group dance based on polarities of force, impulse, time, space, vocal and instrumental sound.
- PE 230 Introduction to Recreation (3 crs.)**
The history of recreation from primitive man to the present. Philosophies of recreation, leisure, work and play are presented. Recreation services and career opportunities are discussed. Professional organizations and literature are reviewed.
- PE 240 Fundamentals of Athletic Training (3 crs.)**
Classroom course emphasizing athletic fitness, the roles and responsibilities of the athletic trainer, and the prevention and management of sport injuries. The classroom experience will be enhanced by personal observation of the training room.
- PE 252 Water Safety Instructor (2 crs.)**
Instruction in advanced aquatic skills and teaching methods. Students who demonstrate a high level of skill and the necessary teaching attitude will receive Red Cross Certification as Water Safety Instructors.
- PE 310 Physical Education for Adults (3 crs.)**
An analysis of Physical Education programs planned specifically for meeting the sociological, psychological, and physiological needs of adults and senior citizens. Opportunities will be provided for the observation of existing programs.
- PE 312 Strategies and Analysis in Teaching Physical Activities (3 crs.)**
Designed to prepare the student with an understanding of the learning and development of skill performance in a variety of environments. Major emphasis will be placed on learning progressions, organizational patterns, teaching strategies and cues, skill analysis, error correction and performance evaluation of activities.
(Prerequisite: PE 101, PE 217)
- PE 320 Physical Education for the Elementary Classroom Teacher (3 crs.)**
A study of the philosophy and objectives of the elementary school physical education program. Emphasis on the role and responsibilities of the classroom teacher in the program with laboratory experiences teaching children.

‡Note: From the one-credit co-curricular activity, PE/CT 180, and from any and all co-curricular activities for which the College grants credit, a student may accumulate not more than one credit per semester (two per year) nor more than six per four-year degree program.

*Offered for credit in both the Health, Physical Education and Recreation and the Speech Communication, Theatre Arts and Communication Disorders Departments.

Health, Physical Education & Recreation

- *PE/CT 321 Creative Dance for Children (3 crs.)**
The study and experience of Dance as a creative art activity for children. For those planning to work with children in schools, camps, community centers, or enrichment programs. (*Prerequisite: One three credit dance course or consent of the Instructor*)
- PE 324 Physical and Developmental Activities for the Disabled and Handicapped (3 crs.)**
The course consists of basic knowledges and techniques to plan, implement, and evaluate physical and developmental activities and programs for special populations. Topics include a study of sensory disorders, learning disabilities, mental retardation, cerebral palsy and body mechanics. The diagnostic-prescriptive process will be stressed along with the latest screening, assessment and evaluation tools and techniques. (*Prerequisite: PE 217*)
- *PE/CT 325 Creative Dance II (3 crs.)**
Study of impulse, design, metric patterns, dynamic qualities of dance, accompaniment and elements of performance through improvisation and composition. Emphasis will be on increased artistry in the development and presentation of individual and group dances. (*Prerequisite: One 3 credit dance course or consent of the Instructor*)
- PE 326 Fundamentals of Movement Education (3 crs.)**
Analysis and application of components of Movement Education for Early Childhood through the primary grades.
- *PE/CT 328 Movement in the Creative Arts (3 crs.)**
Dance, the art of movement, in its relationship to drama, music, speech, and the visual arts. Creative experiences in each of these areas directed by divisional staff.
- PE 329 Physical Education for Middle and Junior High School Children (3 crs.)**
This course will focus on program objectives, strategies and analysis of teaching physical education in the middle and junior high school. Course will include pre-practicum experiences focusing on program content, progressions and teaching skills commensurate with the play education model. (*Prerequisite: PE 101, PE 217*)
- PE 330 Theory and Principles of Leisure (3 crs.)**
A course designed to provide the student an opportunity to explore the impact of leisure on the society and the individual. Various economic, educational, social and psychological phenomena and the force each has on leisure are examined.
- PE 331 Outdoor Recreation Resources (3 crs.)**
Study of the design, effective use, management and programs of outdoor recreation and conservation areas.
- PE 332 Leadership and the Group Process (3 crs.)**
This course provides theory and experiences necessary to develop an understanding of leadership, group dynamics and effective group skills.
- PE 333 Camp Leadership and Organized Camping (3 crs.)**
A study of organized camps and camping programs with particular emphasis on program planning, selection and training of staff, and administrative details in organized camping.
- PE 340 Principles and Practices in Athletic Training (3 crs.)**
Application of joint and musculoskeletal anatomy in the recognition, evaluation and management of athletic injuries. (*Prerequisite: PE 240*)
- *PE/CT 352 Dance History (3 crs.)**
Examination of dance from an historical perspective: movement, themes, composition, and accompaniments as expressive of specific western cultures. Re-creation of individual and group dances from selected historical periods.

**Offered for credit in both the Health, Physical Education and Recreation and the Speech Communication, Theatre Arts and Communication Disorders Departments.*

Health, Physical Education & Recreation

- PE 390 Field Based Pre-Practicum — Physical Education (3 crs.)**
Designed to provide the student with an introduction to teaching physical education in an off-campus setting.
- PE 401 Physiology of Exercise (3 crs.)**
Includes the study of various systems, their interrelationships and adjustments during exercise and as a result of training. Emphasis is on current research findings and what remains to be discovered in man as a moving being. Two hours lecture and two hours laboratory. (*Prerequisite: BI 280*)
- PE 402 Physiology of Exercise II (3 crs.)**
An in-depth study of human physiological principles as applied to exercise, sport activity and research. Special emphasis is on neurological control, exercise in relation to cardiovascular disease, and factors affecting performance. (*Prerequisite: PE 401 or equivalent*)
- PE 403 Cardiovascular Function, Analysis and Evaluation (3 crs.)**
Includes cardiovascular dynamics as studied through anatomy, electrophysiology, and the pathology of the cardiovascular system. Specific emphasis will be placed on the analysis of the cardiovascular system through non-invasive methods of evaluation. (*Prerequisite: PE 401 or equivalent*)
- PE 404 Exercise Prescription and Cardiac Rehabilitation (3 crs.)**
This course focuses on the development of individualized prescriptive exercise programming with regard to stress test evaluations and individual contra-indications. Environmental conditions along with intensity, duration and frequency of physical activity will be studied in order to develop programs. Special attention will be given to high-risk populations and post-cardiac patients. (*Prerequisite: PE 401 or equivalent*)
- PE 410 Physical Education in Agency Programs (3 crs.)**
In-depth study of physical education within the social agency setting with emphasis on program development and instruction supplementing the normal school program.
- PE 411 Organization and Administration of Health, Physical Education and Recreation (3 crs.)**
Development of policies, administrative practices, interfaculty and interstaff relationships, supervision, public relations, fiscal practices, development and use of facilities.
- PE 412 Planning, Implementation, and Evaluation in Teaching Physical Education (6 crs.)**
Designed to develop teaching competencies related to the planning, implementation, and evaluation aspects of instructional programs in physical education. To provide methods of enhancing teacher-pupil behaviors and creative learning environments.
- PE 414 Coaching (3 crs.)**
The application of teaching and learning principles as related to the player, team, coach and the athletic program. Areas to be included will be psychology and philosophy of coaching, organization and administration of the program, coaching techniques, conditioning and evaluative procedures.
- PE 415 Methods and Techniques in Coaching Baseball (1 cr.)**
Offensive and defensive fundamentals, offensive and defensive team play and administration.
- PE 416 Methods and Techniques in Coaching Basketball (1 cr.)**
The theory and practice of basketball coaching; including the study of offensive and defensive systems, drills, training and conditioning of basketball squads.
- PE 417 Methods and Techniques in Coaching Football (1 cr.)**
History of football, fundamentals of line and backfield play, team defense and offense, field generalship, scouting, athletic injuries, and study of rules.
- PE 418 Methods and Techniques in Coaching Field Hockey (1 cr.)**
Theory and practice of coaching field hockey, including skills, strategies, conditioning and coaching responsibilities. (*Prerequisite: PE 132 or comparable experience*)
- PE 419 Methods and Techniques of Coaching Volleyball (1 cr.)**
Theory and practice of coaching volleyball, including skills, conditioning, offensive and defensive strategies. (*Prerequisite: PE 131 or comparable experience*)

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- PE 420 Methods and Techniques in Coaching Lacrosse (1 cr.)**
The theory and practice of lacrosse coaching; including the study of offensive and defensive fundamentals and systems, drills, training and conditioning of lacrosse squads.
- PE 421 Methods and Techniques in Coaching Soccer (1 cr.)**
Teaching the skills of kicking, trapping, heading, dribbling, tackling, throwing; defensive and offensive soccer.
- PE 422 Methods and Techniques in Coaching Track and Field (1 cr.)**
How to train for track and field events. Form and technique in track and field.
- PE 423 Methods and Techniques in Coaching Swimming (1 cr.)**
Open to all students who have an American Red Cross Senior Life Saving Certificate. Emphasis placed on organizing, developing, and training swim teams on the age group and high school level.
- PE 424 Methods and Techniques in Coaching Wrestling (1 cr.)**
Fundamentals in free-style wrestling with emphasis on basic maneuvers. Theory and practice work.
- PE 425 Officiating Baseball (1 cr.)**
Rules and techniques in officiating baseball; organizations of officials; practical experience.
- PE 426 Officiating Basketball (1 cr.)**
Techniques of officiating basketball. Practical as well as theoretical examinations are included with opportunity to earn a recognized rating.
- PE 427 Officiating Football (1 cr.)**
Rules and techniques in officiating football; organizations of officials; practical experience.
- PE 428 Officiating Soccer (1 cr.)**
Rules and techniques in officiating soccer; organizations of officials; practical experience.
- PE 429 Officiating Field Hockey (1 cr.)**
Techniques of officiating field hockey. Practical as well as theoretical examinations are included with opportunity to earn a recognized rating.
- PE 431 Officiating Volleyball (1 cr.)**
Techniques of officiating volleyball. Practical as well as theoretical examinations are included with opportunity to earn a recognized rating.
- PE 432 Officiating Lacrosse (1 cr.)**
Rules and techniques of officiating lacrosse played with women's rules, including organizations for umpires. Practical experience. (*PE 140 or comparable experience*)
- PE 439 Analysis and Application of Teacher Behavior (3 crs.)**
Analysis of verbal and non-verbal teaching behavior through direct observation techniques with focus on the teaching of health and physical education. Course will include specific categories of teaching behavior and styles of teaching, review of the literature related to teaching effectiveness, direct observation of teaching and micro-teaching.
- PE 440 Scientific Basis of Coaching (3 crs.)**
Examination of the physiological considerations and mechanical principles in coaching both individual and team sports. Emphasis will be on training and the improvement of skill.
- PE 445 Adventure Programs (3 crs.)**
The planning and development of adventure and challenge programs in physical education and related disciplines. Students will be involved in theoretical and practical aspects of adventure curriculums and will be expected to participate in a variety of activities, primarily in the out of doors. Topics will include backpacking, rock climbing, orienteering, winter camping, survival, and ropes course activities.

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- PE 446 Advanced Adventure Programs (3 crs.)**
This course builds on basic adventure program knowledges and skills and includes the development of new knowledge and skills of an Outward Bound nature, culminating in a 7-day expedition which will take place during an academic vacation period. (*Prerequisite: PE 445 or equivalent experience*)
- PE 447 Rope Course Use and Construction (3 crs.)**
Instruction in the theoretical and practical aspects of Ropes Course use and instruction and experience in constructing Ropes Course elements.
- PE 448 Man and Movement: Humanistic Perspectives in Sport and Physical Education (3 crs.)**
This course, which will be conducted with seminar format, will explore the humanistic dimensions of sport and physical education. The framework for the course will be provided by an overview of the nature of a humanistic physical education and sport program. Participants will review some of the factors that currently hinder humanistic models in structured movement programs. These negative factors will be contrasted with some alternative, more positive visions of physical education and sport, visions that give evidence of the role of structure movement in evolving a more humane society and "self-actualized individual." (*Prerequisite: Involvement in Physical Education or athletics as a coach or instructor*)
- PE 450 Administration of Athletic Training (3 crs.)**
Emphasis on policies and procedures related to organization and administration of a comprehensive athletic training program on a high school and/or college level. Includes administrative concerns in planning rehabilitation programs for athletes including the legal aspects of the application of therapeutic modalities. (*Prerequisite: PE 240*)
- PE 451 Theoretical and Practical Use of Wheelchairs for Mobility, Sports and Leisure Activity (3 crs.)**
Designed for the professional who works with the disabled and handicapped. The theoretical and practical use of wheelchairs for mobility and participation in sports, leisure activities, as well as the importance of such participation for rehabilitation will be discussed and analyzed.
- PE 460 Park and Recreation Facilities (3 crs.)**
A study of planning, development, and maintenance of parks and recreation facilities; includes inspection of areas and preparation of plans.
- PE 461 Organization and Administration of Public Recreation (3 crs.)**
Organization and administration of recreation at federal, state and local levels; legislative provisions, governmental control, financing, budget, personnel, departmental organization, and administrative practices.
- PE 462 Programming for Recreation and Leisure (3 crs.)**
The opportunity to plan, conduct, evaluate and observe a wide variety of both on-campus and community-based programs and activities.
- PE 463 Field Problems in Recreation (3 crs.)**
A study of selected problems in various areas of recreation through guided individual and group field experience. (*Prerequisite: Permission of the Instructor*)
- PE 465 Theory and Development of Play (3 crs.)**
Provides theoretical foundations for play based on classical and modern theories and on research findings.
- PE 470 Sociology of Sport (3 crs.)**
Examination and analysis of the types of forces at work in American society and how they relate to sports. Among the topics to be included are the influences of our cultural heritage, philosophy of education, politics, religion, economy, ethnics, mass media, and internationalism. Lectures, readings, class discussions, and written assignments will be directed toward enhancing the individual's understanding of the values of sport in our society yesterday, today, and tomorrow. (*Prerequisite: 3 credits in Sociology*)
- PE 471 Psycho/Social Aspects of Sports (3 crs.)**
This course is designed to provide for a study of the relationships between sport activities and the psychological nature of man as a study in the sociocultural process. (*Prerequisite: PY 100, SO 202*)

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- PE 475 Games Leadership Workshop (3 crs.)**
This workshop is designed for people interested in building relationships through play in games. The games emphasis will move away from the familiar competitive, play experience to the non-competitive, supportive and cooperative play experience. Participants will develop a repertoire of games suitable for all ages. Leadership competence will provide participants with the tools to take games to others in schools, business, community groups and the family.
- PE 479 Problems in Physical Education and Athletics (3 crs.)**
The recognition, discussion, and systematic analysis of controversial issues and problems. Topics studied are: optimum use of facilities, ethical practices, finance relationships with nonschool programs, interscholastic athletic competition below high school level, youth fitness, crowd control, injury prevention, program evaluation, and community organization for health, physical education and recreation.
- PE 481 Organization and Administration of School Athletics (3 crs.)**
Athletic policies and regulations on the local and state levels, administrative plans, contest management, the purchase and care of equipment, athletic awards, finance and budget, athletic facilities, scheduling, public relations, the intramural program, and trends in interscholastic athletics.
- PE 482 Public Relations in Physical Education (3 crs.)**
The study of a public relations philosophy, as well as specific and practical techniques. Planning and preparation of annual reports, speeches, brochures, displays, demonstrations and press releases. Course projects are planned to help upgrade the public relations programs in the departments and schools represented.
- PE 484 Physical Education for Special Needs Children and Youth (3 crs.)**
The planning and development of physical education programs considered appropriate to the needs, interests and abilities of exceptional children and youth. Emphasis will be placed on the contribution that physical education can make to the education and well being of the physically, mentally and emotionally handicapped child.
- PE 485 Integration of Physical Activity: Home, School and Community (3 crs.)**
Provides an awareness of potential interrelationships between classroom, home, and community environments with physical education activities.
- PE 487 Psychological Aspects of Coaching (3 crs.)**
Emphasis on coach-player relations, dealing with motivation, the coach and his personality, common problems in coaching, and evaluating the players. (*Prerequisite: PY 100*)
- PE 490 Orthopedic Assessment in Athletic Training (2 crs.)**
To acquaint students with the interests, areas of expertise, and function of the Orthopedic Surgeon so that the student can make appropriate and informed referral to the physician. Clinical examination of the musculo-skeletal system through the use of case studies will be demonstrated. Emphasis will be placed on history taking, utilization of diagnostic testing, surgical procedures performed, and prognosis. Course will include visiting lecturers from the medical profession. (*Prerequisite: PE 240 and PE 340*)
- PE 492 Practicum in Student Teaching — Physical Education (15 crs.)**
Full-time teaching for one semester with supervision provided by members of the department faculty. (*Prerequisite: Acceptance and good standing in Teacher Preparation Program and satisfactorily completed Department Teacher Preparation Program courses*)
- PE 494 Advanced Study of Motor Programs for Special Needs Children and Youth (3 crs.)**
Included is the study of nutritional disturbances, emotionally disturbed, socially maladjusted, disadvantaged, and chronic medical problems. A culmination of professional experiences to include a study of perceptual motor programs, behavior modification, advanced techniques of motor assessment and grantmanship. The role of the adapted physical educator as a resource and itinerant teacher will be presented. (*Prerequisite: Undergraduate: PE 217 and PE 324; Graduate: PE 484 and PE 508 or consent of the Instructor*)
- PE 498 Field Experience in Physical Education (3-15 crs.)**
A field experience offers qualified students the opportunity to gain practical experience within their major. Placements are made in both public and private agencies and are designed to complement a student's concentration within the major. (*Prerequisite: Consent of the Department*)

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- PE 499 Directed Study in Physical Education (1-3 crs.)**
Open to all juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- PE 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- PE 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- PE 505 Principles and Techniques of Supervising Student Teachers in Physical Education (3 crs.)**
A course designed to provide physical education teachers with knowledge relating to the nature of supervision, the role of the cooperating teachers and their impact on student teachers, methods for observing and recording teaching behaviors and suggestions for helping student teachers implement instructional strategies. Theoretical and practical experience will be provided. (*Prerequisite: Public School Teaching*)
- PE 506 Philosophy and Principles of Physical Education (3 crs.)**
Philosophical inquiry into the discipline of physical education including a study of trends and forces in education as they affect the field. (*Prerequisite: 6 credits in Physical Education*)
- PE 507 The Child and His Movement Behavior (3 crs.)**
Current concepts and trends related to movement experiences of children with emphasis on developmental movement, and learning. (*Prerequisite: 12 credits in Physical Education or permission of the Instructor*)
- PE 508 Motor Learning (3 crs.)**
Integration of biological and psychological concepts in the acquisition of motor skills including environmental conditions, developmental factors and learning theories. (*Prerequisite: 3 credits in Psychology*)
- PE 510 Concepts of Curriculum Development (3 crs.)**
Current educational trends, theories relative to physical education and the development of curricular models, with a focus on the needs of today's society. (*Prerequisite: 9 credits in Physical Education or permission of the Instructor*)
- PE 511 Research Methods in Physical Education**
This course will develop competencies needed to both produce and consume research in Physical Education and allied areas. Via the development of a research proposal, students will gain an understanding of such research techniques as problem formulation, literature review, sampling, hypothesis construction, research design, instrumentation, and data analysis.
- PE 512 Administration of Physical Education (3 crs.)**
Application of administrative principles to the physical education program. (*Prerequisite: 12 credits in Physical Education or permission of the Instructor*)
- PE 513 Educational Games for Elementary and Middle School Level (3 crs.)**
A comprehensive study of the movement approach to educational games with emphasis on analysis of games. Progression utilizing thematic approach and curriculum development will also be presented.
- PE 514 Improving Teaching Effectiveness in Physical Education (3 crs.)**
The course will focus on the techniques for observing and analyzing teacher and student behavior, the application of classroom management techniques and the study of teacher effectiveness research. A format through which teachers can gather data for use in self analysis and improvement of instruction will be examined.
- PE 520 Health Fitness Program Planning and Management (3 crs.)**
Designed to address strategies essential to the development of successful exercise and health fitness programs. Emphasis will be placed on program development, motivational techniques and administrative considerations. (*Prerequisite: At least one course in exercise physiology or permission of the Instructor*)

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- PE 521 Child's Play — A Learning Medium (3 crs.)**
Provides a vehicle for discovering the relationship between the developing pre-school child and the world of play. Adults involved with children in any capacity will become familiar with the contributions of play to the child's mastery of self and the environment. The effect of play on psychomotor, affective and cognitive development will be considered.
- PE 540 Sports Injuries: Prevention and Care (3 crs.)**
An introduction into the theories and principles surrounding the care and prevention of athletic injuries. Classroom study will include pre-season conditioning programs, protective equipment, acute emergency injury and illness care and prophylactic techniques.
- PE 545 Physical Conditioning and Training in Sports and Exercise (3 crs.)**
This course is designed to provide the sport practitioner, i.e., the coach, athlete, team trainer, and physical educator with a basic understanding of the physiologic principles underlying the physical conditioning process. Methods of planning, implementing and evaluating training programs will be the main focus of attention. (*Prerequisite: Introductory course in exercise physiology or permission of the Instructor*)
- PE 595 Internship in Physical Education (1-6 crs.)**
An internship offers qualified students the opportunity to gain substantial practical experience within their major. Placements are designed to complement a student's program concentration. (*Prerequisite: 12 graduate credits of physical education and permission of advisor*)

PHYSICAL EDUCATION ACTIVITY COURSES

Physical Education Activity courses are offered on a quarter or semester basis for the following credit: 1.0 credit for a three-hour quarter course; 2.0 credits for a three-hour semester course. A maximum six-credit hours in physical education courses may be used toward graduation (this does not apply to physical education majors).

- PE 131 Volleyball I — Beginner**
Concepts and fundamental skills of volleyball, team play, rules and game strategy.
- PE 132 Field Hockey I**
Development of basic skills, concepts and strategies for playing the game with understanding and application of rules.
- PE 133 Basketball — Beginner**
Fundamental skills of basketball, elementary offense and defense strategies.
- PE 134 Self Defense**
An understanding and application of preventive measures necessary for self defense.
- PE 140 Lacrosse I**
Concentration on the basic skills of the sport and on the elementary form of the game.
- PE 141 Soccer**
Fundamental skills of soccer including: kicking techniques, trapping, heading, offensive and defensive strategy and rules of the game.
- PE 145 Flag Football**
Concepts and fundamental skills of the game including rules and strategy of play.
- PE 150 Beginner Swimming**
Basic aquatic orientation. Emphasis on developing basic swimming strokes, survival floating for the shallow water swimmer.

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- PE 152 Senior Life Saving**
Theory and skills of senior life saving. Satisfactory completion of the course entitles students to Red Cross Senior Life Saving Certificate. (*Prerequisite: Swimming II or comparable experience*)
- PE 157 Movement and Relaxation I**
Theories and techniques of Yoga and relaxation, and basic movement related to daily activities.
- PE 160 Survey of Dance**
Introduction to Dance as the Art of Movement, exploration and expressive use of force, time, and space, elements common to Dance and all movement in daily activities, sports, drama and music.
- PE 161 Folk Dance**
Folk dance terminology, formations, and dance steps. Course will include insight into the background and customs of the people in the countries where the dances originated.
- PE 162 Creative Modern Dance I**
Problems in basic forms, movement impulse, design in movement, construction and use of musical instruments in dance. Emphasis on increased awareness, freedom and control of the individual and group.
- PE 163 Aerobic Dance**
A series of easy to learn dances that combine the health and figure benefits of jogging with the fun and vigor of dancing. It is recommended that participants should be in good physical condition and anyone over 35 years have a physical examination prior to enrolling in the class.
- PE 164 Square Dance**
An introduction to the contemporary square dance.
- PE 170 Bowling I — Beginner**
Concepts and fundamentals of bowling: approach, delivery, follow through, and strategy of play. \$3.00 per week fee, approximately.
- PE 173 Archery I — Beginner**
Concepts and fundamental skills of archery including methods of aiming, scoring, and introduction to novelty events.
- PE 174 Tennis I — Beginner**
Concepts and fundamental skills of tennis including forehand, backhand, serve, rules and strategy of singles and doubles play.
- PE 175 Golf I — Beginner**
Concepts and fundamental skills of the game including rules and scoring. A minimal fee of approximately \$3.00 for use of facilities will be charged.
- PE 176 Badminton I — Beginner**
Fundamental skills, rules and game concepts in order to prepare students for satisfying play experiences.
- PE 182 Ski Touring**
Introduction to basic skills and knowledge of Ski Touring. Instruction in choosing equipment, waxing, touring techniques and conditioning.
- PE 186 Track & Field**
Skills of track and field including running, jumping, throwing events, and their progressions.
- PE 189 Skiing I — Beginner**
The beginner skills of side stepping, kick turn, herringbone, straight running, snowplow, snowplow turns, traverse, stem turns, and safety aspects of the sport. Equipment is supplied. A minimal charge of approximately \$5.00 will be charged for use of off-campus facilities.
- PE 190 Conditioning**
Concepts, exercises and activities related to the development of physical fitness, including isometrics, weights and running.

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PE 194	Wrestling Fundamentals of college wrestling with emphasis on mat skills, rules, scoring and strategy.
PE 196	Fencing I — Beginner Concepts and fundamental skills of fencing including defense, feints, lunges, parries, reposts, and disengages.
PE 202	Orienteering Development of skills in the use of maps and compass as related to the sport of orienteering.
PE 203	Basic Rock Climbing Development of fundamental skills and techniques used in rock climbing with special attention to belaying and safety considerations.
PE 231	Volleyball II — Intermediate A follow up of Volleyball I with emphasis on increased proficiency of performance and game strategy. (Prerequisite: Volleyball I or comparable experience)
PE 232	Field Hockey II A follow up of Field Hockey I with emphasis on increased proficiency of performance and game strategy.
PE 233	Basketball II — Intermediate A follow up of Basketball I with emphasis on advanced strategy and game play. (Prerequisite: Basketball I or comparable experience)
PE 235	Rhythmic Activities: Programming For All Ages Designed to provide a basic understanding of rhythmical movements and their application for programming for all age groups. The course will include a variety of expressive locomotor, non-locomotor and manipulative movements.
PE 242	Lacrosse II Refinement of lacrosse skills, further development of game strategy, optimal exposure to officiating techniques.
PE 244	Baseball/Softball Concepts and fundamental skills of the games including rules and strategy of play.
PE 250	Intermediate Swimming Continued emphasis on developing basic swimming skills, strokes, diving, survival techniques. This course is for the deep water swimmer. (Prerequisite: PE 150 or comparable experience)
PE 254	Water Polo Includes basic movements, skills, and maneuvers of the sport of water polo with emphasis on offensive and defensive fundamentals and strategies, practical drills, rules, and regulations.
PE 257	Movement and Relaxation II A continuation and follow up of Movement and Relaxation I with more advanced exercises emphasizing Hatha Yoga and including sequences of movement, work in relaxation, breath control, balance, endurance and general coordination.
PE 258	Dance Technique Rhythmic exercises such as stretching, bending, swinging, twisting, falling, leaping, and jumping; sequences based on combination of the above to increase awareness, skill and control of movement. (Prerequisite: PE 157 Movement and Relaxation or consent of the Instructor)
PE 262	Creative Modern Dance II Dance studies based on the exploration of space-direction, line, plane, level and dimension, verbal accompaniment to prose and poetry, force-action and interaction, dance and music, also includes leading and directing group dance.
PE 270	Bowling II — Intermediate A follow up of Bowling I with emphasis on increased skill and consistency. \$3.00 per week fee, approximately. (Prerequisite: Bowling I or comparable experience)

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- PE 273 Archery II — Intermediate**
A follow up of Archery I with emphasis on increased skill and consistency, and an introduction to field and tournament play. (*Prerequisite: Archery I or comparable experience*)
- PE 274 Tennis II — Intermediate**
A follow up of Tennis I with emphasis on volley, lob, smash, and game strategy. (*Prerequisite: Tennis I or comparable experience*)
- PE 275 Golf II — Intermediate**
A follow up of Golf I with emphasis on increased skill and strategy of play. (*Prerequisite: Golf I or comparable experience*)
- PE 276 Badminton II — Intermediate**
A follow up of Badminton I with emphasis on advanced skills, singles and doubles play, and game strategy. (*Prerequisite: Badminton I or comparable experience*)
- PE 278 Bicycle Touring**
An understanding and appreciation for the sport of cycling through the application of body mechanics, cycling techniques, knowledge of multigear bikes and the many aspects of touring. Students must have a 10-speed bike.
- PE 280 New Games**
This course is designed to introduce the philosophy of new games and develop a repertoire of non competitive, cooperative and collaborative games suitable for a variety of age groups. The students will experience the psychomotor and affective components embodied in the new games concept.
- PE 285 Gymnastics**
Concepts and fundamental skills of vaulting, balance beam, parallel bars, uneven parallel bars, high bar, side horse, rings and free exercise.
- PE 296 Fencing II — Intermediate**
A follow up of Fencing I with emphasis on compound attacks, counter parries, and strategies in bouting. (*Prerequisite: Fencing I or comparable experience*)
- PE 350 Advanced Swimming**
Emphasis on developing high level of aquatic skill through instruction in advanced strokes, springboard diving, swimming turns, and survival techniques. Specialized aquatic activities may be offered. (*Prerequisite: PE 250 or comparable experience*)
- PE 354 Scuba Diving**
The fundamentals of skin and scuba diving. Emphasis on safety using the self contained underwater breathing apparatus. (*Prerequisite: Swimming II or comparable experience, physical examination*)
- PE 355 Synchronized Swimming**
Swimming and diving skills and stunts choreographed to music. (*Prerequisite: Swimming II or comparable experience*)
- PE 356 Canoeing I**
Instruction in fundamental skills of canoeing, and small craft safety techniques.
- PE 364 Square Dance Calling**
This course is designed to acquaint the student with the knowledge and skills needed to call, create, and teach square dance. It includes timing and phrasing of the music, analysis of dance composition, pattern and singing calls, and construction of progressions for teaching novice dancers.
- PE 374 Tennis III**
Advanced strategies of singles and doubles play and participation in advanced competition.

Department of High School, Middle School, and Adult Education

Chairperson and Graduate Program Coordinator:
Professor of Education/Philosophy Robert E. Fitzgibbons
Professor: Robert Mogilnicki
Associate Professors: David Englund, Paul Kelley,
Leo McGuirk, Raymond ZuWallack

UNDERGRADUATE PROGRAMS

HIGH SCHOOL EDUCATION MINOR

The Department of High School, Middle School, and Adult Education provides students with the theoretical and practical knowledge necessary for becoming effective teachers at the appropriate level. The curriculum includes a detailed consideration of contrasting modes and strategies of teaching and of the psychological theories and philosophical reasons justifying their appropriateness. Theory is related to practice by means of microteaching, role playing, other simulation activities and teaching in area schools. Students gain additional practical experience through tutoring students, assisting or observing teachers, and student teaching at the appropriate level in area schools.

The Department offers a minor in High School Education. A student selecting this minor must in addition select a major in an appropriate academic discipline. The major requirements for each academic discipline, including cognates and the high school education minor, are described on following pages.

All students in a teacher education program must apply for admission, and be accepted in, the Teacher Education Program. Information on the Teacher Education Program may be found in the introductory section of the Division of Professional Education.

The High School Education Minor is designed for students desiring to qualify for one of the following specialized teaching certificates:

Teacher of Art.....	Gr. 5-12	Teacher of Geography	Gr. 9-12
Teacher of Behavioral Sciences	Gr. 9-12	Teacher of History.....	Gr. 9-12
Teacher of Biology	Gr. 9-12	Teacher of Mathematics	Gr. 9-12
Teacher of Chemistry	Gr. 9-12	Teacher of Physics	Gr. 9-12
Teacher of Drama	Gr. 5-12	Teacher of Social Studies	Gr. 9-12
Teacher of Earth Sciences	Gr. 9-12	Teacher of Spanish	Gr. 9-12
Teacher of English	Gr. 9-12	Teacher of Speech	Gr. 9-12
Teacher of French	Gr. 9-12		

In addition to majoring in an appropriate academic discipline (see below, *Major Requirements for Education Minors*), the student also completes the High School Education minor.

High School Education Minor:

ED 220, ED 230, ED 240, ED 360, ED 370, an appropriate course from the group ED 412-426, ED 490 and SE 214

High School, Middle School & Adult Education

MAJOR REQUIREMENTS FOR EDUCATION MINORS

Students desiring to complete a minor in High School Education must also complete an academic major. Appropriate academic majors, along with major and cognate requirements, are listed below. It is important to note that in many cases the major or cognate requirements for students selecting an Education minor are somewhat different from those that hold for students who do not minor in Education. For instance, some majors require two years of a foreign language for non-Education minors, but there is no foreign language requirement for Education minors having the same major.

Anthropology (Teacher of Behavioral Sciences 9-12)

Major courses: AN 201, AN 202, AN 210, AN 302 or AN 321, AN 323, AN 333, plus three Anthropology electives.

Cognate courses: BH 201, SO 302, SO 303 or SO 312, PY 100 or PY 101, PY 224 or PY 226, HI 221, HI 464, HI 345 or HI 366

Art (Teacher of Art 5-12)

Major courses: AR 120, AR 201, AR 202, AR 230, AR 240, AR 250, AR 271, plus four Art electives

Cognate courses: None

Biology (Teacher of Biology 9-12)

Major courses: BI 100, BI 104*, BI 282 or BI 284, BI 240, BI 373, BI 321, BI 428, BI 341, BI 425. (*Students with an A or B grade in BI 100 are not required to take BI 104)

Cognate courses: CH 131, CH 132, PH 181, PH 182, plus two Mathematics courses one of which must be in calculus, statistics, or computer science

Chemistry (Teacher of Chemistry 9-12)

Major courses: CH 100, CH 141, CH 142, CH 241, CH 242, CH 343, CH 344, CH 381, CH 382, CH 450

Cognate courses: MA 101, MA 102, PH 243, PH 244, plus one year of a foreign language

Communication Arts and Sciences

Speech Communication Concentration (Teacher of Speech 9-12)

Major courses: CC 200, CC 210, CC 250 or CC 351, CT 250, CC 260, CD 292, CT 310, CC 360 or CC 363, CC 452 or CC 486, CC 450, CC 495, plus one elective from among the following (CC 400, CT 330, CT 392, CT 390)

Cognate courses: None

Theatre Arts Concentration (Teacher of Drama 5-12)

Major courses: CC 200, CC 210, CC 250, CT 250, CD 292, CT 380, CT 390, CT 431, CT 432, CT 395, plus one course from among the following (CT 290, CT 310, CT 330, CT 392, CC 400, CT 420) plus four credits from CT 130 and/or CT 131

Cognate courses: one course from among the following (EN 215, EN 241, EN 242, EN 353, EN 356)

Earth Sciences (Teacher of Earth Science 9-12)

Major courses: ES 100, ES 101, ES 284, ES 301, ES 306, GE 303, ES 372, ES 463, plus 12 additional semester hours of approved Earth Sciences electives

Cognate courses: MA 101-102 or MA 103-104, CH 131-132 or CH 141-142, plus one year of Physics or Biology; proficiency in a foreign language at the intermediate level

English (Teacher of English 9-12)

Major courses: EN 101, EN 102, EN 301, EN 323, one English Literature course before 1800, one English Literature course after 1800, one American Literature course, one Shakespeare course, one writing course above the Freshman level, plus three English electives.

Cognate courses: Proficiency in a foreign language at the intermediate level

High School, Middle School & Adult Education

French (Teacher of French 9-12)

Major courses: LF 181, LF 182, LF 201, LF 281, LF 252, LF 301, LF 352, LF 381, LF 382, LF 401, LF 452, plus one French elective

Cognate courses: None

In addition to the above, certification as a teacher of French requires that the student pass a proficiency examination in the language.

Geography (Teacher of Geography 9-12)

Major courses: GE 100, GS 110, GE 216, GE 304, GS 362, GE 471, GS 353 or GS 473, plus three Physical Geography/Earth Science electives, and one field course from among the following (GE 217, GE 354, GE 363, GE 418)

Cognate courses: MA 103, MA 104, MA 110; competence in a foreign language at the intermediate level

History (Teacher of History 9-12)

Major courses: Two sequential 100 level courses from Area I or Area III, one 300-400 level course from Area II, one 300-400 level course from Area IV, HI 221, HI 222, three 300-400 level courses from Area V, one course from Area VI, HI 492, one 300-400 level course from Area VIII or one course from among the following (ID 200, ID 210, ID 220, ID 420, SS 300)

Cognate courses: None

History (Teacher of Social Studies 9-12)

Major courses: Two sequential 100 level courses, HI 221, HI 222, two 300-400 level courses in United States History, two 300-400 level courses in non-United States History, HI 492.

Cognate courses: PO 272, PO 277 or PO 360, EC 200, EC 320, SO 202, GS 110, one elective course in Political Science or Geography as a Social Science, one regional Geography course in Geography as a Social Science, one course in Philosophy or Religion.

Mathematics (Teacher of Mathematics 9-12)

Major courses: CS 101, MA 101, MA 102, MA 201, MA 202, MA 301, MA 401, MA 200, one course in algebra, advanced calculus or foundations, one course in probability, statistics or applied mathematics, one course in geometry, history of mathematics or seminar, and one elective in higher mathematics

Cognate courses: PH 243, PH 244, plus one year of a foreign language

Physics (Teacher of Physics 9-12)

Major courses: PH 243, PH 244, PH 375 or PH 385, PH 387, PH 388, PH 389, PH 392, PH 403

Cognate courses: MA 101, MA 102, MA 201, MA 316, CH 141, CH 142

Psychology (Teacher of Behavioral Sciences 9-12)

Major courses: PY 100 or PY 101, PY 224 or PY 226, PY 251, PY 310, PY 319, PY 360, one Psychology elective, plus one course from among the following (PY 318, PY 324, PY 340, PY 353)

Cognate courses: BH 201, BI 102, BI 112 or BI 311, AN 201, AN 304, HI 221, HI 464, HI 366, SO 302, SO 303 or SO 312; a one-year sequence of a foreign language at the intermediate level or its equivalent

Sociology (Teacher of Behavioral Sciences 9-12)

Major courses: SO 202, SO 305, SO 400, SO 402, one course from among the following (SO 303, SO 304, SO 306, SO 312), one course from among the following (SO 302, SO 327, SO 328), plus two Sociology electives.

Cognate courses: BH 201, AN 201, AN 202, PY 100, PY 224 or PY 226, HI 221, HI 464, HI 345 or HI 363

Spanish (Teacher of Spanish 9-12)

Major courses: LS 181, LS 182, LS 201, LS 202, LS 251, LS 252, LS 281, LS 282, LS 292, plus three Spanish electives

Cognate courses: None

In addition to the above, certification as a teacher of Spanish requires that the student pass a proficiency examination in the language.

High School, Middle School & Adult Education

GRADUATE PROGRAMS

MASTER OF ARTS IN TEACHING

The Department of High School, Middle School, and Adult Education offers the degree of Master of Arts in Teaching in association with a number of academic departments at the College. As described below, while primarily designed for inservice teachers, this degree also allows persons who are not currently certified at the high school level to complete a State-approved post-bachelor's certification program. The Master of Arts in Teaching program is described under the heading *Graduate Degree Requirements — Master of Arts in Teaching* in the Graduate School section of this catalogue.

In addition, students may focus on high school education issues, such as computers in education, as part of a Certificate of Advanced Graduate Study (CAGS) program; for details, consult the CAGS in Education description in this catalogue.

All accepted students must enroll under the direction of their advisors in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. For advice relative to the Master of Arts in Teaching program, those not yet accepted should consult with the chairperson of the appropriate academic department and the chairperson of the Department of High School, Middle School, and Adult Education.

POST-BACHELOR'S CERTIFICATION PROGRAM

The post-bachelor's teacher certification program is designed for graduate students desiring to qualify for one of the following specialized teaching certificates:

Teacher of Art	Gr. 5-12	Teacher of Geography	Gr. 9-12
Teacher of Behavioral Sciences	Gr. 9-12	Teacher of History	Gr. 9-12
Teacher of Biology	Gr. 9-12	Teacher of Mathematics	Gr. 9-12
Teacher of Chemistry	Gr. 9-12	Teacher of Physics	Gr. 9-12
Teacher of Drama	Gr. 5-12	Teacher of Social Studies	Gr. 9-12
Teacher of Earth Sciences	Gr. 9-12	Teacher of Spanish	Gr. 9-12
Teacher of English	Gr. 9-12	Teacher of Speech	Gr. 9-12
Teacher of French	Gr. 9-12		

In order to be eligible for this program, students must apply for and be admitted to an appropriate Master of Arts in Teaching (M.A.T.) program offered through the Graduate School. It should be noted, however, that students may complete the teacher certification program prior to fulfilling the requirements for the M.A.T. degree.

Students must satisfactorily complete the following education course requirements: GS 501; ED 220; ED 240; ED 360 or ED 480 or ED 580; ED 370; an appropriate course from the group ED 412-426, or ED 440; ED 230 or ED 520; ED 490; and SE 214 or SE 510. Specific education course requirements may be waived if the student demonstrates proficiency and, when appropriate, documents successful and relevant experience.

A prerequisite for admission to ED 490 Student Teaching Practicum - High School is the satisfactory completion of a minimum of 27 credits of course work in the academic area associated with the certificate sought. Some or all of these courses may have been completed prior to admission to this post-bachelor's level teacher education program.

Persons interested in an M.A.T. program in order to obtain teacher certification should contact the Chairperson of the Department of High School, Middle School, and Adult Education for details regarding their program of study.

The departmental offerings listed on the following pages include the following courses which may not be taken for graduate credit: all courses at the 200 level and ED 499.

High School, Middle School & Adult Education

COURSE OFFERINGS*

- ED 220 Teaching in the High School (3 crs.)**
Introduction to teaching in contemporary high school classrooms. Developing competencies in effective, understandable and appropriate modes of communication in teaching is stressed through microteaching and other simulations. Emphasis is also placed on understanding the contemporary high school, e.g. various organizational structures, curricula, teacher roles, etc. Students gain attendant, meaningful experiences through observing, tutoring or assisting teachers in area high schools.
- ED 230 Educational Psychology (3 crs.)**
Designed to assist prospective teachers to better conceptualize education from a psychological point of view, the course examines two complementary thrusts in psychology as they relate to the teaching-learning enterprise: (1) Developmental Psychology and (2) the Psychology of Individual Differences. Emphasis is placed upon understanding the intellectual, emotional, social and moral stages that all learners go through. Stress upon the psychology of individual differences (e.g., different cognitive learning styles, personality differences) promotes more awareness as to how individual learners vary from each other.
- ED 240 Classroom Management in the High School (3 crs.)**
Study of different approaches to classroom management in the high school. Developing competencies in various approaches to classroom management, including the maintenance of a sense of order, relating to students as individuals and as members of groups, and creating a positive atmosphere, is stressed. Students gain attendant, meaningful experiences through field work in area high schools.
- ED 360 Aims and Philosophy of High School Education (3 crs.)**
The aims of high school education, its curriculum, structure and teaching strategies are examined using the concepts and methodologies of philosophy. Developing competencies in thinking clearly and rationally in identifying goals and objectives, designing curricula, and selecting materials, media and techniques are stressed. Emphasis is also placed on understanding the philosophical issues embedded in the rational determination of the above, especially as these relate to education in a multi-cultural society. (This course may not be taken for credit by students who have satisfactorily completed ED 480.)
- ED 370 Evaluating Teaching and Learning in the High School (3 crs.)**
Developing competencies in the design and use of various evaluative instruments appropriate to the high school. Particular emphasis is placed on using the results of evaluation to improve instruction, problems of interpretation, and correcting for bias. (*Prerequisite: ED 230*)
- ED 380 Contemporary Issues in Education (3 crs.)**
The identification and analysis of fundamental issues currently facing the American educator. The goal is to understand the source of the problems and to evaluate suggested solutions.
- ED 381 Soviet Education (3 crs.)**
This course will first introduce the land, climate and peoples of the USSR. Their education will then be studied within the framework of Russia's thousand-year-old civilization, as well as within the contemporary collective setting. Teaching and learning on all levels will be treated, in both the European and Asian parts of the country with its over 60 native tongues. American and Soviet sources will be used.
- ED 384 Canadian Education Seminar (3 crs.)**
The seminar provides the opportunity for students to explore the political, economic, ethnic, social, and cultural complexities of education in Canada. Particular emphasis is placed on the problem of the reconciliation of National and Provincial goals. One field trip per semester is an integral part of the inquiry. Each student will be expected to bear the cost of his/her own expenses for the field trip.

*See page 68 for general information regarding course offerings

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- ED 412-426 Strategies for Teaching in the High School (3 crs.)**
Strategies, including methods, materials and media, for teaching particular disciplines are studied. Developing competency and versatility is stressed through simulations and guided teaching in area high schools. A student registers for the course appropriate to his/her major according to the following schedule:
- | | |
|----------------------------|---------------------------|
| ED 412 Social Studies | ED 419 Physical Science |
| ED 414 English | ED 421 Biology |
| ED 415 Behavioral Sciences | ED 422 Mathematics |
| ED 416 Earth Sciences | ED 424 Foreign Language |
| ED 417 Geography | ED 425 Art |
| | ED 426 Speech and Theatre |
- (Prerequisite: ED 230, ED 360, ED 370)
- ED 440 Methods and Materials in Secondary Education (3 crs.)**
Emphasis is on the analysis of teaching in the modern secondary school. Topics will include: the learning process; establishing objectives; classroom organization and management; meeting individual differences; evaluation; correlation between subject matter fields; and recent developments in methodology and subject matter. Primarily for those interested in gaining certification, undergraduates with no teaching experience, and teachers who have been away from the classroom for many years. Offered only through the Program of Continuing Education. (Prerequisite: ED 230)
- ED 443 Secondary School Curriculum (3 crs.)**
Purposes of the modern secondary school and the curriculum needed to implement them; historical origins, modern development, and future possibilities. Stress is on the manner in which the curriculum is built, behavioral objectives, resource centers, assisting in curriculum construction, and methods of curriculum evaluation. Offered only through the Program of Continuing Education.
- ED 480 Philosophy of Education (3 crs.)**
Thinking critically and imaginatively about education from the viewpoint of philosophy. Emphasis is placed on understanding the philosophical presuppositions underlying educational practices and policies.
- ED 490 Student Teaching Practicum — High School (15 crs.)**
Students are assigned appropriate student teaching stations where they work in an approved situation under an experienced supervising teacher. This is a practical experience for one semester in a public school where student teachers are functioning as professional teachers. A college supervisor visits to assist the student teacher. Seminars may be held to exchange experiences. Students are expected to carry a minimum responsible teaching load equal to 50% of the regular teacher's assignment. Full time for one semester. (Prerequisite: Acceptance and good standing in Teacher Preparation Program, ED 412-426 -- graduate students must first complete 24 graduate credits of approved degree work or obtain permission from the Director of the Division of Professional Education)
- ED 499 Directed Study in High School Education (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (Prerequisite: Consent of the Department)
- ED 504 Humanistic and Behavioral Foundations of Education (3 crs.)**
A review of the theoretical foundations of selected social sciences (history, philosophy, sociology, economics) and their practical application to educational issues and problems. Students will review the development of American education using the above social sciences to analyze its evolution in terms of intent and content. Students will select, research and report on current issues or problems, and will research and report on areas in the emerging social sciences, e.g., information theory, decision-making theory, systems theory.
- ED 505 Historical Foundations of Education (3 crs.)**
Historical persons, events and movements which have built man's educational establishment from antiquity to current developments in the American school scene. (Prerequisite: ED 480)
- ED 520 Psychological Foundations of Education (3 crs.)**
A systematic exploration of the various psychological principles related to teaching and application of these principles in specific classroom situations. Special emphasis on social psychology, dynamics in interpersonal relationships and group processes, motivation, and discipline theory. (Prerequisite: PY 100 and one of the following: PY 224, PY 226, PY 252, ED 230)

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- ED 523 Directed Study in Educational Psychology (credit to be arranged)**
Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for an M.A.T. Students who wish to enroll in Directed Study should obtain the form, *Request for Directed Study*, at the Graduate School Office well in advance of registration. The completed form should be filed with the Program of Continuing Education at the time of registration. (*Prerequisite: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's advisor*)
- ED 524 Seminar in Foreign Languages Methods and Materials (3 crs.)**
Intended primarily for teachers with some experience, the course will concentrate on new developments in materials and methods, with emphasis on career opportunities, the teachers of culture, individualized instruction and the supervision of student teachers. (*Prerequisite: A course in foreign language methods and materials*)
- ED 545 Curriculum Development for the Academically Talented Student in the Secondary School (3 crs.)**
Survey of current curricula status and problems that face the academically talented student. A study of techniques for modifying curricula to meet school, community, and individual needs. An examination of means of evaluation of curriculum's effectiveness. Search for local and regional resources to satisfy the academic needs of the talented.
- ED 548 Parenting Curriculum Development (3 crs.)**
Theory, instructional techniques, and materials for teaching parenting skills in the high school. (*Prerequisite: Bachelor's degree and teaching certificate*)
- ED 578 Educational Software Development and Computer Applications I (3 crs.)**
An introduction to computer programming, the BASIC language and LOGO as they relate to the development of educational software. Significant hands-on experience with computers. As a final project, students will develop software for classroom application. (*Prerequisite: EE 468, ED 468, or permission of the Instructor*)
- ED 579 Educational Software Development and Computer Applications II (3 crs.)**
An advanced course in educational software development which includes DOS, files, and graphics. Focuses on the Apple II computer. Students develop several software packages for direction application in the classroom. (*Prerequisite: ED 578*)
- ED 580 Philosophical Foundations of Education (3 crs.)**
A critical and intensive analysis of selected concepts and beliefs which function as the basis of recent philosophies of education and their relation to current educational practices and policies. Readings from recent philosophers of education. (*Prerequisite: ED 480*)
- ED 583 Directed Study in the Philosophy of Education (credit to be arranged)**
Designed for individuals who desire to study selected topics in this field. Variable credit, and repetitive up to a total of 4 credits for an M.A.T. Grades will be given. Students who wish to enroll in Directed Study should obtain the form, *Request for Directed Study*, at the Graduate School Office well in advance of registration. The completed form should be filed with the Program of Continuing Education at the time of registration. (*Prerequisite: Acceptance in a master's degree program at Bridgewater State College and completion of at least 15 graduate credits approved by the student's advisor*)
- ED 590 Sociological Foundations of Education (3 crs.)**
A critical examination of the effects of various social institutions, group, and situations on educational policy and content. (*Prerequisite: SO 202 or permission of the Instructor*)

Department of Media and Librarianship

Chairperson and Graduate Program Coordinator:

Professor Alan Lander

Associate Professor: Robert Ward

Assistant Professors: Thomas Lee, Francis Murphy,
Richard Neubauer

As detailed below, the Department of Media and Librarianship offers undergraduate minors in the areas of Instructional Media, Radio and Television Operation and Production, and Library Science. At the graduate level, the Department offers programs leading to a Master of Education in Instructional Media, Master of Education in School Librarianship, and Certificate of Advanced Graduate Study (CAGS) in Education with areas of study in media and/or library science. For CAGS details, consult the CAGS in Education section of this catalogue.

In addition, the Department offers, in conjunction with all of its graduate offerings, a program designed to prepare Unified Media Specialists in accordance with Massachusetts certification standards. This program has been approved by the Massachusetts Department of Education. This includes certification reciprocity with signatory states under the Interstate Certification Compact.

INSTRUCTIONAL MEDIA

Instructional Media programs offer students the opportunity to become adept at and proficient in the use of the latest media theory, techniques, and technology in education.

UNDERGRADUATE PROGRAMS

INSTRUCTIONAL MEDIA MINOR

ME 310 or ME 311, ME 452, ME 456, ME 460
Six (6) additional credits in Instructional Media (with program approval)

RADIO AND TELEVISION OPERATION AND PRODUCTION MINOR

For detailed information on this minor, see the catalogue section entitled *Undergraduate Multidisciplinary and Pre-Professional Programs*.

GRADUATE PROGRAM

MASTER OF EDUCATION IN INSTRUCTIONAL MEDIA

This program is designed for present and future media specialists.

The following are program course prerequisites which may be fulfilled after admission: ED 443 or EE 450, and EE 420. Credits earned in these courses may not be counted toward the minimum of thirty-three graduate credits required for the degree. Students who have matriculated or who plan to matriculate in the graduate program should receive program approval prior to enrolling in courses which will be used to fulfill degree requirements.



Library, 1890

Media & Librarianship

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. As part of their program, students must satisfactorily complete the following curriculum:

1. Research Methods and Findings: ME 524 Seminar in Instructional Media — 3 graduate credits.
2. Humanistic and Behavioral Studies: Consult *Graduate Degree Requirement — Master of Education* in the Graduate School section of this catalogue — 6 graduate credits.
3. Program Requirements: ME 310, ME 412, ME 452, ME 456, ME 460, and ME 464 — 18 graduate credits.
4. Program Electives: Courses appropriate to the program and approved by the advisor — 6 or more graduate credits.

Information regarding Unified Media Specialist certification is provided on the following pages. For additional information relative to this program, students not yet accepted should consult with the program coordinator.

The program offerings listed below include the following courses which may not be taken for graduate credit: ME 498, ME 499.

LIBRARY SCIENCE

Library Science programs provide students with practical and theoretical courses, workshops, and field experiences that will enable them to acquire the philosophy and professional competencies necessary to be a successful school or public librarian.

UNDERGRADUATE PROGRAMS

This program offers library instruction to all undergraduate students and to those who wish to minor in library science. The undergraduate minor in library science is designed for Education majors and High School minors as well as other students who wish employment in public and special libraries.

Suggested electives for students in other programs: ML 300 for classroom teachers, school administrators; ML 310 for elementary classroom teachers, Special Education and Reading; ML 320 for High School teachers; ML 370 for students wishing to upgrade their research skills.

Acceptance of transfer credits in library science courses must be approved by the Department.

LIBRARY SCIENCE MINOR

ML 310 or ML 320, ML 370, ML 430, ML 440, ML 498
At least two additional courses in Library Science (with department approval).

GRADUATE PROGRAM

MASTER OF EDUCATION IN SCHOOL LIBRARIANSHIP

This program is designed primarily for school librarians; many of the courses, however, are of value to educators outside of the library profession.

A minimum of thirty approved graduate credits is required for this degree program. It should be noted that additional credits may be required by the program advisor, as determined by the student's library science background. The program's Comprehensive Examination includes both written and oral sections.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. As part of their program, students must satisfactorily complete the following curriculum:

Media & Librarianship

1. Research Methods and Findings: GC 500 Research and Evaluation — 3 graduate credits.
2. Humanistic and Behavioral Studies: Consult *Graduate Program Requirements — Master of Education* in the Graduate School section of this catalogue — 6 graduate credits.
3. Program Requirements: ML 310 or 320, ML 370, ML 430, ML 440, and ML 595 — 18 graduate credits.
4. Program Electives: Courses appropriate to the degree program and approved by the advisor. At least two electives must be selected from Library Science courses offered for graduate credit only (500 level) — 6 or more graduate credits.

Admission requirements, in addition to the application information provided in the Graduate School section of this catalogue, include:

Successful completion of a personal interview with the Admissions Committee of the Department (applicants will be contacted by the Department).

Information regarding Unified Media Specialist certification is provided below.

Course offerings which may not be taken for graduate credit are: ML 102, ML 498, and ML 499.

UNIFIED MEDIA SPECIALIST PROGRAM

This track may be taken in conjunction with the Master of Education in Instructional Media, Master of Education in Library Science, or CAGS in Education programs. It is designed to prepare students to meet the Massachusetts Department of Education's requirements for certification as a Unified Media Specialist. It should be noted that a student who has completed all of the following requirements may apply for certification prior to completion of his or her graduate degree or CAGS program.

Prerequisites for admission to the program:

1. Possession of a Massachusetts classroom teaching certificate.
2. Successful completion, with a grade of B or better, of ML 300 Introduction to Unified Media Services and ME 310 Introduction to Instructional Media.

1. Completion of 30 hours of course work as follows:

- ME 310 Introduction to Instructional Media
- ME 452 Basic Photography
- ME 456 Radio and TV Production I
- or
- ME 556 Operation and Control of a Radio Station and a Television Studio
- ME 460 Graphics for Designing Media
- or
- ME 560 Graphics for Media Specialists
- ME 464 Management of an Instructional Media Department
- or
- ME 564 Administration of Media Programs
- or
- ML 430 Management of Media Programs
- ML 300 Introduction to Unified Media Services
- ML 310 Children's Literature (required for N-9 certification)
- or
- ML 320 Literature for Young Adults (required for 5-12 certification)
- ML 370 Reference Materials and Their Use
- ML 440 Organization of Materials
- One appropriate 3-credit elective from the following ME or ML offerings (chosen with approval of the student's advisor):

Electives for N-9 certification:

- ME 412 Communication Theory
- ML 452 Collection Development
- ML 453 Sharing Literature with Children

Electives for 5-12 certification:

- ME 412 Communication Theory
- ME 466 Cinematography I
- ML 452 Collection Development

Media & Librarianship

Note: All course projects and requirements must be related to the level of preparation (i.e. N-9 or 5-12 certification).

2. Completion of three different field experiences in the above course sequence prior to the beginning of the practicum. These experiences are offered in the following courses:

ME 310 Introduction to Instructional Media

ME 464 Management of an Instructional Media Department

ME 564 Administration of Media Programs

ML 300 Introduction to Unified Media Services

ML 430 Management of Media Programs

3. Completion of half-semester practicum or internship judged successful on the basis of the program's standards — ME/ML 595.



Media & Librarianship

COURSE OFFERINGS*

MEDIA

- ME 310 Introduction to Instructional Media (3 crs.)**
Introduction to instructional media and technology incorporating selection, production, evaluation and utilization of instructional materials. Instruction in application of still pictures, slides, filmstrips, recordings, radio, television, and other media. This course is highly recommended for those people involved with training programs in business, industry, and/or education.
- ME 311 Introduction to Instructional Media for Special Education (3 crs.)**
Same as ME 310 with guided research applicable to all areas of Special Education.
- ME 315 Media Presentation Skills for Business and Management Training (3 crs.)**
This course will help students develop basic media techniques. Instruction will center around the mastery of media presentation skills for those in business, management, and related fields.
- ME 320 Sound-Slide Production Techniques (3 crs.)**
This course provides an opportunity to learn basic techniques for producing slide-tape productions. Skills include planning presentation, scripting, storyboarding, photographic techniques, and sound recording. These skills are valuable for people in fields such as education, business, advertising, and/or public relations where training or presentation of messages is important.
- ME 412 Communication Theory (3 crs.)**
Applies basic concepts of communication to problems related to training and instruction. Modern techniques and applications will be thoroughly discussed and practiced.
- ME 420 Advanced Techniques in Instructional Media (3 crs.)**
Directed study course. Development of a multi-media package of materials to be used in a training or instructional setting. Materials are produced by the student under the guidance of the instructor. (*Prerequisite: ME 310, 452, 456, 460 or consent of the Instructor*)
- ME 452 Basic Photography (3 crs.)**
This course is designed to enable the student to learn and put into practice the basic fundamentals of photography. Techniques such as proper camera handling, exposure, elements of composition, black and white film development and printing, proper darkroom use and photo mounting are included. Students must have access to an adjustable camera.
- ME 453 Intermediate Photography (3 crs.)**
This course is for those students who have a basic working knowledge of B&W photography, basic darkroom skills and can make good negatives and prints. The course will help the student to increase his visual awareness through regular shooting assignments and critiques and will also enable the photographer to develop a better understanding of exposure control, equipment and B&W processes in order to achieve a better final print. The course content includes an introduction to the Zone System, the relationship between exposure, film development and the printing process, toning, controlling contrast, print finishing, visual composition, and self-critiquing. The student will need an adjustable camera and must furnish his own film and paper. (*Prerequisite: ME 452 or consent of the Instructor*)
- ME 454 Script Writing for Radio, Television, and/or other Media (3 crs.)**
This course explores the many techniques necessary for the design of scripts for use in radio and television. The student will write scripts for actual studio production.
- ME 456 Radio and TV Production I (3 crs.)**
The student will learn all of the technical operations necessary to direct radio and TV programs. Students will work on actual productions.

*See page 68 for general information regarding course offerings

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- ME 457 Photography Techniques (3 crs.)**
The student will acquire and practice advanced photography skills. Techniques such as proper print finishing, print toning, preparation of black and white and color slides, use of the copy stand and the fundamentals of color printing are included. This course is recommended for only those students who have taken a basic photography course or its equivalent. (*Prerequisite: ME 452 or consent of the Instructor*)
- ME 458 Radio and TV Production II (3 crs.)**
Designed to make the student proficient in the production of radio and TV programming, with stress upon being able to make, obtain, and set up necessary props, background, trick camera shots, and sound effects. (*Prerequisite: ME 456 or consent of the Instructor*)
- ME 459 Advanced Radio and Television Production (3 crs.)**
Students will be given the opportunity to apply their previously-acquired knowledge and skills in the areas of operations, scriptwriting, and directing to the complete production of a radio and a television program. (*Prerequisite: ME 454, ME 456, ME 458*)
- ME 460 Graphics for Designing Media (3 crs.)**
An introductory course in basic graphic skills necessary for producing instructional materials and/or graphics for television. Course includes instruction in the use of simple mechanical lettering devices; mounting and laminating techniques; diazo and color-lift transparency production; composition and related skills. (*Prerequisite: Consent of the Instructor*)
- ME 464 Management of Instructional Media Department (3 crs.)**
The following functions are discussed: personnel, budgeting, purchasing, analysis of materials and equipment, in-service training, curriculum support, and classification and cataloguing of instructional materials. (*Prerequisite: Consent of the Instructor*)
- ME 466 Cinematography I (3 crs.)**
Basic film production techniques and their application are taught. Topics such as scripting, the motion picture camera, lighting, shooting, splicing and editing are included. Students will work with super 8mm and/or 16mm equipment and materials.
- ME 470 Field Experience in Photography (3 crs.)**
During the semester, the students will be taken on a series of field trips. While on location, the instructor will assist students in determining good composition, solving problems related to light measurement and determining correct exposure under a variety of conditions. Emphasis will be placed on regular shooting assignments in the field and critiques which will be held on campus or at a suitable off-campus location. Students must have access to an adjustable camera, a tripod, a cable release, and a gray card. Although not necessary, it is desirable for the student to have a hand-held light meter. (*Prerequisite: ME 452 or consent of the Instructor*)
- ME 472 Expressive Photography (3 crs.)**
During the semester the students will thoroughly study photography as an expressive medium. Topics will include personal and impersonal expression, photographic styles, street photography, scenic photography, the nude in photography, photographic abstraction, symbolism in photography, and photographic sequencing. Students will complete a portfolio of photographs that are related to the course topics. The student must have an adjustable camera, tripod, cable release, hand-held light meter, and a gray card. (*Prerequisite: ME 452 and ME 453 or consent of the Instructor*)
- ME 479 Topics in Photography (3 crs.)**
Topics of current or special interest in photography. Special topics to be announced prior to registration. This course may be repeated for different topics.
- ME 498 Internship in Media and/or Librarianship (3-15 crs.)**
Offered to advanced undergraduate students who wish to acquire a supervised practical experience within their field of study. (See information in this catalogue under *Academic Programs* for a more complete description). (*Prerequisite: Consent of the Department*)
- ME 499 Directed Study in Non-Print Media (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)

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- ME 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field (i.e. Nonprint Instructional Media). For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- ME 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field (i.e. nonprint instructional media). For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- ME 524 Seminar in Instructional Media (3 crs.)**
This course is designed to carry out a systematic review and critique of media research literature and to bring about the ability to design and execute a research study pertinent to the field. Selected research and literature will be reviewed and analyzed. (*Prerequisite: EE 420 or consent of the Instructor*)
- ME 553 School Public Relations (3 crs.)**
The necessity for a well-informed public to foster good school public relations. All necessary media will be discussed: radio, television, newspapers, magazines, school publications, teacher-parent and administrator-teacher-parent relationships. Emphasis will be placed on communication theory.
- ME 556 Operation and Control of a Radio Station and a Television Studio (3 crs.)**
This course is intended for graduate students who are planning to be media specialists. It is designed to give the student an operational knowledge of the skills necessary to operate a radio station and a television studio. Production skills are also included.
- ME 558 Radio and Television Production (3 crs.)**
This course is intended for graduate students who are planning to be media specialists. It provides for the student with basic background in radio station and television studio operation opportunities to practice production and programming. (*Prerequisite: ME 566 or consent of the Instructor*)
- ME 560 Graphics for Media Specialists (3 crs.)**
This course is designed for graduate students. It is an introductory course in intermediate graphic skills necessary for producing instructional materials and/or graphics for television. It is particularly intended for the person who is planning to be a media specialist. Course includes instruction in the use of simple mechanical lettering devices; mounting and laminating techniques; diazo and color-lift transparency production; composition and related skills. (*Prerequisite: Consent of the Instructor*)
- ME 564 Administration of Media Programs (3 crs.)**
This course is designed for graduate students. It covers the principles and practices of the administration of media programs, particularly from the unified media approach. Areas of study include planning, equipping, servicing, and operation. (*Prerequisite: Consent of the Instructor*)
- ME 566 Cinematography II (3 crs.)**
Advanced techniques of film production in all of its technical phases, including production, design, editing, and sound synchronization. (*Prerequisite: ME 466 or consent of the Instructor*)
- ME 595 Professional Practicum/Internship (6 crs.)**
Involves observation and participation in all important aspects of administration, including selection and organization of materials; reference and bibliographic services, and techniques of teaching media use. This course must be pursued at a media center approved by the Media and Librarianship Department at Bridgewater and may only be waived, in the case of non-certification students, if the student has had considerable experienced as a media specialist in a situation acceptable to the Department. (*Prerequisite: Completion of, or enrollment in, all other courses of the program*)

Media & Librarianship

LIBRARIANSHIP

- ML 102 Library Introduction (1 cr.)**
New students are familiarized during one quarter of their first academic year. One period per week is devoted to developing basic library skills. One one-hour period per week during one quarter. Must be taken during first year of attendance.
- ML 300 Introduction to Unified Media Services (3 crs.)**
The philosophy, functions, and evaluation of the media center in the school for future teachers, administrators, librarians, and media specialists. Correlation of the media center with the modern curriculum, the use of print and non-print materials in the media center, and the mutual cooperation of administration, faculty, and students. 40 hours of observation in a variety of school media centers is required as part of the course.
- ML 310 Children's Literature (3 crs.)**
Reading, listening and viewing interests and abilities, from pre-school through the elementary grades, as important considerations in evaluation and selection of materials; analysis of literary and artistic elements, and cultural influences of both past and present. Types include myth and folklore, poetry, modern fanciful tales, realistic fiction, and books in special fields, e.g., biography, history, and science.
- ML 320 Literature for Young Adults (3 crs.)**
Survey of literature and audio visual materials for adolescents. Includes applicable principles of adolescent psychology, a brief history of the development of this literature, criteria and aids for selection, techniques in motivation and reading guidance, and skills in reading, listening and viewing. Designed for teachers, librarians, and media specialists working with junior and senior high school students.
- ML 370 Reference Materials and Their Use (3 crs.)**
Introduction to the basic reference books in all subject disciplines. Bibliographic search assignments give practical application of techniques using all the resources of the media center.
- ML 430 Management of Media Programs (3 crs.)**
Principles and practices in administration and service; the role of the media center in the school's educational program, pupil instruction in media center use; the planning and equipping of the media center; and other aspects of organization.
- ML 440 Organization of Materials (3 crs.)**
Presentation of practical techniques for print and non-print cataloging with emphasis on Dewey Decimal classification and Sears Subject Headings. Some time is given to the general processing of materials and to evaluation of commercial cataloging services.
- ML 452 Collection Development (3 crs.)**
Criteria and policies in selection of print and non-print material for reader interest and curriculum enrichment, with emphasis on practical applications and appraisal of bibliographic aids and current review practices. Offered only through the Program of Continuing Education.
- ML 453 Sharing Literature with Children (3 crs.)**
Traditional and contemporary storytelling, reading aloud, response-centered activities, book talks, book-related film programs based on the concept of sharing as an integral part of a literature program; emphasis on selection, planning, techniques of presentation, e.g., puppets, flannelboard, hook-and-loop, and evaluation.
- ML 455 Film Librarianship (3 crs.)**
A comprehensive study of the 16 millimeter film, stressing its use in school and public libraries: brief history and development of theatrical, documentary, and experimental cinema; evaluation and criticism; resources and programming, selection, and distribution. Offered only through the Program of Continuing Education.
- ML 498 Internship in Librarianship (3 crs.)**
Offered to advanced undergraduate students who wish to acquire a supervised practical experience within their field of study. (See information in this catalogue under *Academic Programs* for a more complete description).
(Prerequisite: Consent of the Department)

Media & Librarianship

- ML 499 Directed Study in Library Science (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- ML 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- ML 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- ML 548 Advanced Cataloging and Classification (3 crs.)**
Theoretical discussion and practical application of techniques in detailed cataloging with emphasis on Library of Congress classification and subject headings. Includes non-book cataloging.
- ML 553 Foundations of Library and Information Science (3 crs.)**
Form and function of classical, medieval, and scholarly libraries; the public library as the people's university; development of information centers, libraries, and media centers, and their role in contemporary society.
- ML 558 Advanced Studies in Literature for Children and Young People (3 crs.)**
A seminar format which offers the student an opportunity to explore recent artistic, literary, and social developments in books and media for the young, or for study of particular genres or themes. (*Prerequisite: ML 310 or 320 or consent of the Instructor*)
- ML 559 Advanced Reference I (3 crs.)**
Research methods using specialized reference sources, professional journals, and audio-visual materials, intended for *retrospective* studies in history, literature, music, philosophy, religion, and the arts. (*Prerequisite: ML 370*)
- ML 560 Advanced Reference II (3 crs.)**
Research methods using specialized reference sources, professional journals, government documents, microforms, and audio-visual materials, intended for the study of the social and behavioral sciences and services, and pure and applied science and technology, focusing on contemporary materials and topics. (*Prerequisite: ML 370*)
- ML 566 Computer and Systems Design for Small Libraries (3 crs.)**
Survey of developments in information retrieval and other library applications of modern procedures in acquisition, circulation, management, and periodical control. (*Prerequisite: Permission of the Instructor*)
- ML 569 The Book Arts (3 crs.)**
Traces the development of the written word from the earliest alphabet to today's computerized publishing. The history, art, and science of the book include field study of book production; manuscripts, rare books and bindings; and award-winning books.
- ML 576 Research Problems in Library Literature (3 crs.)**
Designed for special projects for advanced students desiring individual instruction in the methods of library research. (*Prerequisite: Consent of the Department*)
- ML 590 Seminar on Librarianship (3 crs.)**
Intended as a culminating exercise in administrative librarianship. It will include study and analysis of current problems and issues in library administration. Students will seek solutions to these through reading and research. (*Prerequisite: A minimum of 12 credit hours in Library Science and consent of the Advisor*)

Media & Librarianship

ML 595

Professional Practicum (6 crs.)

Involves observation and participation in all important aspects of administration, including selection and organization of materials; reference and bibliographic services, and techniques of teaching library use. This course must be pursued at a media center approved by the Media and Librarianship Department at Bridgewater and may only be waived, in the case of non-certification students, if the student has had considerable experience as a media specialist in a situation acceptable to the Department. (*Prerequisite: Completion of, or enrollment in, all other courses in the program*)



Counseling Programs

The Counseling Program Committee

Program Coordinator: Dean Martha Jones

Professor: Vincent Worden

Associate Professor: Leo McGuirk

Staff: Paul Gaines, James Plotner, Richard Veno

Programs leading to the degree of Master of Education in Counseling and the Certificate of Advanced Graduate Study in Education with an emphasis on Counseling are designed to prepare graduates for employment in a variety of mental health settings, entry-level positions in college student personnel work, and as counselors in elementary and secondary schools. For CAGS details, consult the CAGS in Education section of this catalogue.

Students seeking certification as school guidance counselors (N-9, 5-12) follow a program of study which has been approved by the Massachusetts Department of Education. This includes certification reciprocity with signatory states under the Interstate Certification Compact. For details, students should consult the program coordinator.

MASTER OF EDUCATION IN COUNSELING

The Committee subscribes to the general policies of admission as outlined by the Graduate School. Candidates should be able to demonstrate through paid or non-paid experience an aptitude for counseling. In addition, in the case of certain applicants, a personal interview may be required. Full-time students who commence their study during the spring or summer semesters should be able to complete requirements within one full academic year. While a teaching certificate is not required, candidates seeking school counselor positions are urged to obtain appropriate certification credentials.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. A minimum of thirty-six approved graduate credits is required in this degree program. Students must satisfactorily complete the following curriculum. Program modifications may be made only with the approval of the advisor.

1. Research Methods and Findings: GC 500 Research and Evaluation - The research topic selected must relate to the degree program, or additional research-based study through GC 502 or GC 503 will be required — 3 graduate credits.
2. Humanistic and Behavioral Studies: GC 430 The Guidance Function in School, Agency and Community Settings, ED 520 Psychological Foundations of Education — 6 credits.
3. Departmental requirements: SA 560 (may be waived for persons with appropriate teaching experience or non-educational career goals), GC 530, GC 533, either GC 535 or GC 536, GC 538, GC 539, and an appropriate Practicum or Internship — 21-24 credits.
4. Program Electives: Courses appropriate to the degree program and the personal/career goals of the individual student. Degree candidates are urged with the approval of their advisor to consider the wide range of complementary courses offered by other departments — minimum of 3 to 6 credits.

Prospective candidates who have not been formally accepted into the program are urged to confine their selection of courses to curriculum areas other than program electives. Specific assistance may be obtained from the Committee Coordinator.

Counseling

Comprehensive examinations are administered in November and April. The examination, which requires a solid understanding of and a high level of competency in the areas emphasized by the Counseling Program, may not ordinarily be taken prior to the last term of course work. Previous examinations are on reserve at the Main Desk at the Maxwell Library.



June, 1915: Members of the classes of 1915 and 1916. Front row - Celia Tucker and Ruth Sinnott; Middle row - Gladys Webster, Marion Stackpole, Stella Monks, Grace Blockmer; Bertha Johansen; Top row - Delight Tiethill, Edith Wilde, Vellora Uhorf, Dorothy Little, and Helen Morrill. The school celebrated its 75th anniversary when they were students.

Counseling

COURSE OFFERINGS*

- GC 430 The Guidance Function in School, Agency and Community Settings (3 crs.)**
Designed to acquaint the pre-professional counselor with the various aspects of the total guidance program which result in a continuous and meaningful sequence of services to clients, students, professional staff, and the community. Philosophical and psychological issues will be addressed as well as current practices. Pre-practica field component included.
- GC 450 Career Counseling Strategies (3 crs.)**
Designed to give the counseling professional an intensive, hands-on experience in the techniques and strategies of career counseling. Provides exposure to the major current theories of career life planning and to a range of techniques to be used with clients. Applicable to school and agency counselors and to persons currently undergoing career change.
- GC 500 Research and Evaluation (3 crs.)**
The completion of a research paper is the main objective of this course which is designed to serve the beginning graduate student. To that end, the course will stress the nature of, and criteria for, conducting and evaluating research. The necessary library techniques and resources for selecting and delimiting problems, appraisal of related research literature, as well as documentation, organization and format of a research study will be reviewed in depth. Concepts in descriptive statistics will also be reviewed. *(Prerequisite: EE 420, a statistics course, or permission of the Instructor)*
- GC 502 Research (3-6 crs.)**
Original research undertaken by the graduate student. For details, consult the Graduate School section of this catalogue for information on Independent Study.
- GC 503 Directed Study (3-6 crs.)**
Designed for the graduate student who desires to study selected topics in the counseling field or engage in field work. For details, consult the Graduate School section of this catalogue for information on Independent Study. *(Prerequisite: Completion of 15 approved graduate credits and acceptance in the Counseling Program)*
- GC 522 Measurement of Intelligence: Stanford-Binet (3 crs.)**
Training in the administration, scoring and interpretation of the Stanford-Binet Intelligence Scale. A test kit is necessary. *(Prerequisite: PY 100 and one of the following: EE 420, a statistics course, or GC 533)*
- GC 524 Measurement of Intelligence: WAIS, WISC-R, and WPPSI (3 crs.)**
Training in the administration, scoring and interpretation of the forms of the Wechsler Intelligence Scale. A test kit is necessary. *(Prerequisite: PY 100 and one of the following: EE 420, a statistics course, or GC 533)*
- GC 526 Projective Assessment Techniques I (3 crs.)**
A basic training course in the administration, scoring and interpretation of selected projective instruments including the Bender Gestalt, TAT, CAT, HTP and MMPI. Projective aspects of the Wechsler and Stanford-Binet Scales will be emphasized. *(Prerequisite: GC 522 and/or GC 524)*
- GC 527 Projective Assessment Techniques II (3 crs.)**
An in-depth experience utilizing a case-study approach in the implementation of Battery Testing. Advanced techniques utilizing the Bender Gestalt and TAT as well as an introduction to the Rorschach will be included. *(Prerequisite: GC 526 or permission of the Instructor)*
- GC 530 Counseling Theory and Practice (3 crs.)**
An analysis of the major theories of counseling and the application of techniques utilized in the counseling process will be emphasized. Discussion of situational problems and role playing will allow for the practice of each model as applied in counseling settings. *(Prerequisite: GC 430)*

*See page 68 for general information regarding course offerings

Counseling

- GC 531 Organization and Administration of Guidance Programs (3 crs.)**
Administrative skills required in needs assessment, program design and evaluation of effectiveness will be emphasized. Current laws and regulations will be reviewed and sources of funding explained. Students will develop research and communication approaches to respond appropriately to social, economic and political demands within a school or agency setting. *(Prerequisite: GC 430)*
- GC 533 Psychological Measurement (3 crs.)**
Introduction to the basic principles of group psychological testing and the most commonly used instruments for assessing intelligence, achievement, aptitude, interest, and personality. Emphasis will be placed on test score interpretation within a counseling context. Pre-practica field component included. *(Prerequisite: EE 420 or a course in statistics and GC 430)*
- GC 535 Applied Counseling: Adolescent-Adult (3 crs.)**
Developmental issues, diagnostic techniques and individual and group counseling strategies appropriate for use with adolescents and/or adults will be addressed. Report writing, referral and consultation procedures and current trends will be studied. Pre-practica (5-12) field component included. *(Prerequisite: GC 530, GC 538)*
- GC 536 Applied Counseling: Pre-Adolescent (3 crs.)**
Developmental issues, diagnostic techniques and individual and group counseling strategies appropriate for use with pre-adolescents will be addressed. Report writing, referral and consultation procedures and current trends will be studied. Pre-practica (N-9) field component included. *(Prerequisite: GC 530, GC 538)*
- GC 537 Seminar in Counseling (3 crs.)**
Workshop format course will focus on the initial, middle and final phases of the counseling process. Primary readings will be utilized. Techniques and strategies to promote counseling effectiveness will be practiced. *(Prerequisite: GC 530 or permission of the Instructor)*
- GC 538 Theory and Process of Group Interaction (3 crs.)**
An examination of the theories and processes of group dynamics and their relationship to counseling philosophy. Special emphasis will be placed on the synthesis of leadership, membership, and purpose, as well as the evaluation of the appropriateness of various group counseling applications. *(Prerequisite: GC 530)*
- GC 539 Career Information and Placements (3 crs.)**
Emphasis is placed on the role of the counselor in the career decision-making process. Topics include a survey of selected theories of vocational choice and development and review of the theoretical concepts, issues and trends in career education. The use of career and educational information is considered. Pre-practica field experience included. *(Prerequisite: GC 430)*
- GC 540 Advanced Counseling Theory and Practice (3 crs.)**
An intensive application of counseling practice in a personalized rather than theoretical manner. Theory will be reviewed from the perspective of the student's personal counseling style. An atmosphere of constructive criticism will be developed, providing evaluative feedback to each participant. Maximum use of audio and video tapes will be made. *(Prerequisite: GC 530)*
- GC 541 The Counselor's Role in the Implementation of Federal/State Legislation (3 crs.)**
Provides the participant with information on Chapter 766, 94-142 and 504 special education laws. The counselor's role as TEAM Evaluation participant will be thoroughly covered by addressing the following issues: writing performance objectives, developing educational plans, roles and strategies of the counselor, financial implications, the law and evaluation procedures, and utilization of special education personnel. Other pertinent legislation will be reviewed. *(Prerequisite: GC 430)*
- GC 542 The Facilitation of Group Experience (3 crs.)**
An introduction to the concepts and practices of facilitating various types of group experiences. A number of leadership methods will be presented, and each participant will experience a leadership role under controlled circumstances. *(Prerequisite: GC 538 or permission of the Instructor)*
- GC 543 Theories of Career Development (3 crs.)**
The career development process, the history of its study, its characteristics at each life stage, and the current issues in its facilitation for women, men, couples, and minority persons will constitute the content of this course. Practical applications will include an examination of activities and materials designed to bring about greater awareness of needs, values, interests and abilities related to career decision making. *(Prerequisite: GC 539 or permission of the Instructor)*

Counseling

- GC 544 Introduction to Reality Therapy (3 crs.)**
Course is designed to bring about an awareness and an understanding of the philosophy and basic concepts of Reality Therapy. Activities will enhance opportunity to experience Reality Therapy as a technique for counseling. (*Prerequisite: GC 530*)
- GC 545 Counseling from an Existential-Humanistic Perspective (3 crs.)**
An examination of the philosophy of Existentialism with particular emphasis on its relevance to counseling. Topics include the existential crisis, authenticity, resistance, the role of the counselor, the self, anxiety and choice. (*Prerequisite: GC 530*)
- GC 546 Parent and Family Counseling (3 crs.)**
An introduction to the theory and practice of parent counseling groups and to several models of family counseling. (*Prerequisite: GC 530*)
- GC 550 Psychometrics in 766 for the Counselor (3 crs.)**
Training in the administration, scoring and interpretation of the psychometric instruments used by counselors in work with special needs populations. Will include a demonstration of such instruments as the Leiter, Sequin, Bender-Gestalt, WRAT, PIAT, Merrill Palmer, Dvorine, CMMS, and VMI. (*Prerequisite: GC 522 or GC 524*)
- GC 551 Student Personnel Work in Higher Education (3 crs.)**
An intensive introduction to the literature of student personnel and student development. Basic concepts, philosophies and current models, practices and issues in the field will be studied. (*Prerequisite: GC 530*)
- GC 552 The Role of the Counselor in the Community Agency (3 crs.)**
The role of the counselor in a variety of community settings will be examined. Theoretical orientation will be viewed in relation to the practical demands of community settings. Issues related to legislation, staffing, intake and referral, community liaison, funding and program evaluation will be discussed. (*Prerequisite: GC 530*)
- GC 553 Seminar in College Admissions (3 crs.)**
An introduction to the matters related to the transition of students to higher education. Specifically designed to allow the individual to experience and procure the necessary background to function as a Secondary School or College Admissions Counselor. (*Prerequisite: GC 530*)
- GC 554 Internship — School Guidance Counselor (N-9) (6 crs.)**
GC 555 Internship — School Guidance Counselor (5-12) (6 crs.)
Candidates who do not hold Massachusetts classroom teacher certification and/or have one year full time teaching experience or who are employed less than full-time, but at least one-fifth time in the role and at the level of the certificate desired, must complete a 300 clock hour internship within two calendar years. Students must register with the Program Coordinator by May 15 for the fall semester internship or by October 15 for the spring semester internship. (*Prerequisite: Completion of 18 credits in the Counseling Program including all courses which include pre-practica field experiences*)
- GC 556 Practicum — School Guidance Counselor (N-9) (6 crs.)**
GC 557 Practicum — School Guidance Counselor (5-12) (6 crs.)
Candidates holding Massachusetts classroom teacher certification with one full year of teaching experience must complete a 150 clock hour practicum within one calendar year in the counseling role and at the level of the certificate desired. Supervision will be the joint responsibility of a member of the Counseling Program staff and a certified cooperating site practitioner. Students must register with the Program Coordinator by May 15 for the fall semester practicum and by October 15 for the spring semester practicum. (*Prerequisite: 30 graduate credits in the Counseling Program including all Department Requirements*)
- GC 558 Practicum — Agency Counselor (6 crs.)**
GC 559 Practicum — College Student Personnel (6 crs.)
Candidates must complete a 150 clock hour practicum within one calendar year in a role and at a site approved by the Coordinator of the Counseling Program. Students must register with the Program Coordinator by May 15 for the fall semester practicum and by October 15 for the spring semester practicum. (*Prerequisite: 30 graduate credits in the Counseling Program including all Department Requirements*)

Counseling

GC 560

Special Topics in Counseling (3 crs.)

Special topics of current relevance in counseling will be offered from time to time. The topic to be addressed will be announced in pre-registration publications. May be taken more than once with the consent of the advisor. (*Prerequisite: At least 9 hours in counseling or permission of the Instructor. Course prerequisites may be specified depending upon the nature of the topic.*)



School Administration Program

School Administration Committee

Professors: Walter Adamson, Ray Harper (Coordinator)

Associate Professor: Paul Kelley

Assistant Professors: John Jones, Thomas Wolpert

Staff: Edmund Haughey, Edward Meaney,

Robert Sharples, Stephen Traw, Thomas Walsh

Programs leading to the degree of Master of Education in School Administration and Certificate of Advanced Graduate Study (CAGS) in Education with an emphasis on School Administration are designed to prepare students for the following positions in school administration:

Supervisor/Director*

Elementary School Principal*

Middle School Principal*

High School Principal*

Superintendent/Assistant Superintendent**

*This program has been approved for certification purposes by the Massachusetts Department of Education. This includes certification reciprocity with signatory states under the Interstate Certification Compact.

**This program has been registered for individual certification purposes in Massachusetts with the State Department of Education.

For CAGS details, consult the CAGS in Education section of this catalogue.

MASTER OF EDUCATION IN SCHOOL ADMINISTRATION

A minimum of thirty-six approved graduate credits is required in this degree program. It should be understood that those who anticipate preparing for some of the above positions, such as a superintendency, should plan to do graduate work beyond the minimum.

Applicants are required to enroll in SA 510 Seminar on Educational Leadership for the Future (SELF) prior to any review of their application material. Only those who have completed one year of successful full-time teaching will be considered for admission to the program. Applicants must file the Graduate School form *Certificate of Teaching*.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue.

Students may choose one of five program options: Supervisor/Director, Elementary School Principal, Middle School Principal, High School Principal, or Superintendent/Assistant Superintendent. As part of their chosen program option, students must satisfactorily complete the following curriculum:

1. SA 510 Seminar on Educational Leadership for the Future (prior to admission) — 3 credits.
2. Pre-practicum Requirements (including three field experiences):
 - A. Research Methods and Findings: GC 500 Research and Evaluation — 3 credits
 - B. Humanistic and Behavioral Studies: ED 504 Humanistic and Behavioral Foundations of Education — 3 credits.
 - C. Management and Leadership: SA 511 Educational Leadership and Managerial Effectiveness — 3 credits.

School Administration

- D. Supervision, Evaluation, and Development of Personnel and Programs: SA 564 Selection and Development of Educational Personnel — 3 credits.
 - E. Human Relations, Communications, and Public Relations: SA 567 Human Concerns in the Schools — 3 credits.
 - F. Curriculum Design and Evaluation, and Community Education: SA 578 Curriculum Improvement — 3 credits.
- Elementary School Principal, Middle School Principal, High School Principal, and Superintendent/Assistant Superintendent program options only:
- G. Fiscal Planning and Budgeting: SA 565 School Finance and Business Administration — 3 credits.
 - H. School Law and Labor Relations: SA 569 Legal Aspects of Educational Administration — 3 credits.
 - I. Practical Application - one of the following three courses:
 - SA 561 Elementary School Administration — 3 credits
 - SA 563 Middle School Administration — 3 credits
 - SA 562 High School Administration — 3 credits
- 3. SA 568 Seminar in School Administration — 3 credits.
 - 4. Practicum or Internship (one of the following ten courses):
 - SA 583 Practicum in Supervisorship/Directorship, 6 credits
 - SA 584 Practicum in Elementary School Principalship, 6 credits
 - SA 585 Practicum in Middle School Principalship, 6 credits
 - SA 586 Practicum in High School Principalship, 6 credits
 - SA 587 Practicum in Superintendency/Assistant Superintendency, 6 credits
 - SA 593 Supervisor/Director Internship, 6 credits
 - SA 594 Elementary School Principal Internship, 6 credits
 - SA 595 Middle School Principal Internship, 6 credits
 - SA 596 High School Principal Internship, 6 credits
 - SA 597 Superintendent/Assistant Superintendent Internship, 6 credits

Upon completion of their program option, students seeking Massachusetts certification must possess a Massachusetts teacher's certificate and have had three years of employment in the role covered by that certificate.

Comprehensive examinations are given by the Committee during the months of November and April only. Students should consult the College Calendar in this catalogue for examination request deadlines.

For additional information relative to this program, students not yet accepted should consult with the Coordinator of the program.

School Administration

COURSE OFFERINGS*

- SA 503 Directed Study (3 crs.)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- SA 510 Seminar on Educational Leadership for the Future (3 crs.)**
Designed to provide for individual self-appraisal, institutional assessment, and professional development planning. Offered as a series of six bi-weekly sessions using Friday evenings and Saturday mornings. Provides information on educational leadership and management concepts, situations, problems; provides an introduction to faculty and program; offers counseling assistance for career planning.
- SA 511 Educational Leadership and Managerial Effectiveness (3 crs.)**
Facets of educational leadership and management involved in the effective development of programs designed to meet the needs of students, staff, and the community will be explored. Emphasis is on goal setting, establishing priorities, allocating resources, and facilitating the educational process in response to those needs. Students are expected to do in-depth reading of recent research, particularly in the area of educational administration. (*Prerequisite: SA 510 or permission of the Instructor*)
- SA 559 Administration of Community Education Program (3 crs.)**
Development of an understanding of how administrators can develop a successful educational process in their neighborhood through community involvement and maximum facility planning. (*Prerequisite: SA 510 or permission of the Instructor*)
- SA 560 The American Public School Today (3 crs.)**
A survey of the principles of school organization and administration: program, pupil services, personnel, plant and equipment, and public relations. Emphasis is on common practice, issues and trends. Experience in staff participation through the use of the administrative process in class work and projects both individual and group. (*Prerequisite: ED 380, or ED 382, or ED 480, or permission of the Instructor*)
- SA 561 Elementary School Administration (3 crs.)**
SA 562 High School Administration (3 crs.)
SA 563 Middle School Administration (3 crs.)
The application of the general principles of school administration to the specific problems of the elementary, middle, or high school. Emphasis is on the areas of curriculum development and program evaluation; personnel supervision and evaluation; goal setting, establishing priorities, allocating resources, facilitating the educational process in response to the needs of learners, teachers, and the community; school law; budgeting; plant management; community education; human concerns including dealing in an equitable, sensitive, and responsive manner with students, teachers, parents, and the community. (*Prerequisite: Completion of 15 credits applicable to the program*)
- SA 564 Selection and Development of Educational Personnel (3 crs.)**
Staff selection and development will be studied including theories and techniques of supervision, evaluative procedures to assess the effectiveness of programs and personnel, organizational characteristics of schools and strategies for institutional change, inservice education, and personnel and program planning. (*Prerequisite: SA 510 or permission of the Instructor*)
- SA 565 School Finance and Business Administration (3 crs.)**
A study of the financial support for public schools from local, state, and federal governments. Fiscal planning, budgeting, plant management, state and municipal financing, accounting and purchasing procedures, distribution of supplies and services, transportation, and food service will receive attention. (*Prerequisite: SA 510 or permission of the Instructor*)
- SA 566 School Plant Planning and Administration (3 crs.)**
For the specialist in school administration who may ultimately go on to school district administration at the central office. A study of in-depth coordination of the many factors involved in planning, construction, maintaining and administering the modern school plant. (*Prerequisite: SA 510 or permission of the Instructor*)

*See page 68 for general information regarding course offerings

School Administration

- SA 567 Human Concerns in the Schools (3 crs.)**
A study of theory, research, and practice in the area of human relations in the school including public relations; clear and appropriate communication; and equitable, sensitive, and responsive relations with students, teachers, parents, and the community. (*Prerequisite: SA 510 or permission of the Instructor*)
- SA 568 Seminar in School Administration (3 crs.)**
Study and analysis of current problems and issues in school administration. (*Prerequisite: Completion of 24 credits applicable to the M.Ed. in School Administration Program or, for CAGS students, permission of the Instructor*)
- SA 569 Legal Aspects of School Administration (3 crs.)**
Legal rights, duties and liabilities of school personnel in general relationship to the school committee in Massachusetts will be studied. Intended for administrators, prospective administrators, and classroom teachers interested in the legal aspects of school committees, school property, teaching contracts, labor relations and collective bargaining, tenure, prevention of injury and accidents to students, relationships with parents, and a general survey of educational law cases at the local, state, and national levels. (*Prerequisite: SA 510 or permission of the Instructor*)
- SA 571 Introduction to Theory and Understanding of Group Interaction (3 crs.)**
Directed to teachers and administrators who wish to be more effective in working with groups. Consideration will be given to the group process and staff development with emphasis on the human relations aspect of interpersonal relationships. Group activities will be based on improving understanding and utilization of skills in such areas as communication, cooperation, problem solving, conflict management and decision making. (*Prerequisite: SA 510 or permission of the Instructor*)
- SA 573 Innovative Administration Practices in Modern Education (3 crs.)**
An in-depth study of six or more topics that have current impact on school organization and administration. The innovations studied, selected in part by the class itself, vary from year to year, and may include such areas as Accountability, Cultural Pluralism, Differentiated Staffing, Negotiations, Open Campus, Open Education PPBS, or Rescheduled School Year. (*Prerequisite: SA 510 or permission of the Instructor*)
- SA 577 Education Systems Planning (3 crs.)**
The nature of educational planning in which the student becomes familiar with the process for translating local, state, and national policy in education into an operable organization plan. The course considers the historical and legal background for educational policy, the philosophy and elements of planning of educational innovation and reform so that the student may be able to develop educational plans. (*Prerequisite: SA 510 or permission of the Instructor*)
- SA 578 Curriculum Improvement (3 crs.)**
Contemporary theories of curriculum design and evaluation are explored. Students are expected to develop an eclectic approach to curriculum improvement based upon those theories and upon contemporary organizational factors, including leadership and management. Material is presented relating to developing community education programs, and to personnel and program planning. (*Prerequisite: SA 510 or permission of the Instructor*)
- SA 581-582 Administrator Extern Program I and II (3 crs. each semester)**
A blend of on-the-job training with a seminar approach to administration that is largely self-directed, evolves from the problems of the individuals comprising the group, is informal and takes place in a setting removed from the distractions of everyday life, provides long uninterrupted periods for discussions and interaction of problem statements and of ideas shared in formal presentation. (*Prerequisite: Appointment as an administrator*)
- SA 583 Practicum in Supervisorship/Directorship (6 crs.)**
SA 584 Practicum in Elementary School Principalship (6 crs.)
SA 585 Practicum in Middle School Principalship (6 crs.)
SA 586 Practicum in High School Principalship (6 crs.)
SA 587 Practicum in Superintendentcy/Assistant Superintendentcy (6 crs.)
Assumption of administrative responsibility, in the role and at the level identified by the course title; in a school under the joint supervision of a practicing administrator, in the role and at the level, who is properly certified and tenure-experienced, and a faculty member from the College. Requires a minimum of 150 clock hours (some of which could be after the school's classes are dismissed), 10 hours weekly for a semester of at least 15 weeks or 5 hours weekly for a school year of at least 30 weeks. (*Prerequisite: Completion of all pre-practicum credits applicable to the program*)

School Administration

- SA 593 Supervisor/Director Internship (6 crs.)
- SA 594 Elementary School Principal Internship (6 crs.)
- SA 595 Middle School Principal Internship (6 crs.)
- SA 596 High School Principal Internship (6 crs.)
- SA 597 Superintendent/Assistant Superintendent Internship (6 crs.)

Employment less than full time, but at least one-fifth time, in the role and at the level identified by the course title, in a school under appropriate school and college supervisors. Requires a minimum of 300 clock hours (some of which could be after the school's classes are dismissed), 10 hours weekly for a school year of at least 30 weeks for those students having substantial employment in the appropriate role and at the appropriate level or 5 hours weekly for two such school years for students having minimal employment in the role and at the level. (*Prerequisite: Completion of one-half of the applicable pre-practicum courses*)



Certificate of Advanced Graduate Study (CAGS) In Education

The Division offers a program leading to a Certificate of Advanced Graduate Study (CAGS) in Education, which is designed to meet the varied career needs of professionals who have earned an appropriate master's degree. The primary objectives of this program are to increase the individual's competence in designated areas of study and, by broadening the person's background, to develop increased leadership ability for addressing significant educational/societal issues. Students are required to take at least three courses in their major area of study. In appropriate cases, students will be permitted to follow a program of study in their major area which is designed to meet Massachusetts certification standards. Areas of study offered include:

computers in education	instructional media
counseling (school and community)	physical education
early childhood education	reading
elementary education	school administration
elementary school mathematics	school librarianship
health science	special education.
high school, middle school, and adult education	

Applicants must demonstrate that they possess an academic and experiential background relevant to their field, and must indicate that their needs and goals are in accord with the objectives of the CAGS. In addition to submitting CAGS application material to the Graduate School Office, students must enroll prior to program acceptance in ED 570 CAGS Seminar. (Students who intend to emphasize the area of school administration should enroll in SA 510 Seminar on Educational Leadership for the Future.) The objectives of ED 570 are to allow for a professional assessment of the applicant on a personalized basis; to provide the student with a broad conceptualization of the field, as well as to focus the student's course of study on critical issues facing professionals in the field today; and to initiate individual program planning.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. CAGS credit requirements must be fulfilled by approved courses which clearly meet the student's academic and career needs. Appropriate course work offered outside of the Division will be permitted on a limited basis. In addition to ED 570 CAGS Seminar, students ordinarily will be required, near the completion of their CAGS program, to enroll in ED 581 CAGS Extern Program. The objective of this course is to help the student in a supportive environment enter into new leadership responsibilities making use of the knowledge and skills acquired in their CAGS program of study.

Additional information about the CAGS in Education, including application procedures and academic requirements, may be found in the Graduate School section of this catalogue and by contacting the Graduate School Office.

University of Massachusetts at Amherst

Collaborative Doctor of Education Program

A collaborative Ed.D. program in School Leadership and Administration is offered by Bridgewater State College and the University of Massachusetts at Amherst. The degree is awarded by the University of Massachusetts, but much of the course work leading to the degree is based at Bridgewater State College. Instruction and research for the degree are supervised by the University and Bridgewater State College.

Interested persons must apply first for the Certificate of Advanced Graduate Study in Education program through the Graduate School of Bridgewater State College and enroll in ED 570 CAGS Seminar.

All requirements for the collaborative Ed.D. degree program are similar to those for the Ed.D. degree at the University.

Information about the collaborative program is available from the program coordinator, Professor Ray Harper, 120 Burrill Academic Building, 697-1200, extension 2220.

COURSE OFFERINGS*

- ED 555 Introduction to Statistics and Computer Analysis I (3 crs.)**
Elementary descriptive statistics, control of the computer terminal inferential statistics, and some programming concepts with a computer language for unique solutions of problems. (*Prerequisite: GC 500 or its equivalent*)
- ED 570 CAGS Seminar (3 crs.)**
Designed to provide for individual self-appraisal, institutional assessment, and professional development planning. Provides a broad conceptualization of the field of education and educational leadership; addresses critical societal issues involving education today; focuses on faculty and course resources and the design of the applicant's proposed CAGS program, as influenced by the student's self-assessment and potential leadership responsibilities.
- ED 581 CAGS Extern Program (3 crs.)**
A blend of on-the-job training with a seminar approach to leadership and problem solving that is largely self-directed, evolves from the problems of the individuals comprising the group, is informal, provides long uninterrupted period for discussions and interaction of problem statements and of ideas shared in formal presentations.
- *See page 68 for general information regarding course offerings*



June, 1984: (seated) Trustee Ann McEachern and President Randleau and (standing from right) Trustee Chairman Stephen Merlin, Dr. Ray G. Harper, and graduate students at Trustee Meeting where Collaborative Doctoral Program with the University of Massachusetts-Amherst was approved (see above for program details)

Division of Social Sciences

Geography as a Social Science,
History,
Political Science and Economics

UNDERGRADUATE PROGRAMS

The Division of Social Sciences offers majors in history and political science. There is no major in economics but majors in history and political science are encouraged to select courses in economics and geography to enrich their programs in the area of the Social Sciences.

Students majoring in political science who plan to teach may combine electives in history and education and thus obtain certification in history and the Social Sciences.

GRADUATE PROGRAMS

At the graduate level the Master of Arts degree is offered in the field of history. The degree of Master of Arts in Teaching is offered in history and social sciences.

DIVISIONAL COURSE OFFERINGS

SS 300

Geography and History of Mexico (3 crs.)

The history of colonial New Spain and modern Mexico, focusing on the relationship of the physical environment to the culture of the indigenous population of the Spanish contributions in the development of the nation.

Geography as a Social Science

The faculty and other courses of the Department of Earth Sciences and Geography are listed under the Division of Natural Sciences and Mathematics, page 165.

COURSE OFFERINGS*

- | | |
|------------|--|
| GS 110 | The Cultural Environment (3 crs.)
A study of the distribution of cultural landscapes as interacting with human activities, especially the way in which the spread of people and ideas modify, and are shaped by, the physical world. |
| GS 115 | Map Skills for the Citizen I (1 cr.)
This course will introduce various types of maps, air photos and related graphics. It aims at developing skills for the use of maps in everyday life and in certain career fields. Map types included are: topographic maps, property maps, maps used by the local government, marine charts, maps of recreational areas and road maps. One two-hour period per week. |
| GS 150 | Geographic Approach to Social Sciences (3 crs.)
The interpretation of maps, globes and graphs as the basis for inferences about social phenomena and problems. This course has been developed in cooperation with the Elementary Education Department and is of special interest for future elementary school social studies teachers. <i>Does not satisfy GER.</i> |
| GS 210 | War/Peace (3 crs.)
An introduction to open-ended research and discussion to discover non-lethal resolution of conflicts between groups of human beings in a finite world. |
| GS 252 | Geography of Anglo-America (3 crs.)
A description and analysis of the relationships between relevant physical and cultural features of regions in the United States and Canada. (<i>Prerequisite: GE 100 or 120</i>) |
| GS 261-262 | World Regional Geography I-II (3 crs. for each semester)
Geographical context of current social, economic and political problems in Europe, the U.S.S.R., the Orient, the Middle East, the Pacific World, Africa, Latin America and Anglo-America. Geographical features characteristic of each country and their relationship to a functioning political and economic unit. Either semester may be taken independently. |
| GS 300 | Geography of the Bible (3 crs.)
A geographic description of places and events contained in the Old Testament literature. |
| GS 353 | Urban Geography (3 crs.)
The geographic aspects of the city including location, function, land use patterns, and interaction. Field work focuses on current problems facing urban life. (<i>Prerequisite: GS 110 or consent of the Instructor</i>) |
| GS 358 | Geography of Latin America (3 crs.)
Physical and cultural patterns of selected countries of South America. Emphasis on current economic and political problems. (<i>Prerequisite: GE 100 or 120 or GS 110</i>) |

*See page 68 for general information regarding course offerings

Geography as a Social Science

- GS 362 Economic Geography (3 crs.)**
Simple models and frameworks of the various ways in which man organizes his economic activity. Problems of spatial structure, arrangements and patterns of economic activity. (*Prerequisite: Consent of the Instructor*)
- GS 404 Geography of the U.S.S.R. (3 crs.)**
The geography of environment, resources and population are studied in relation to history and the present economic and social system of the Soviet Union. (*Prerequisite: GE 100 or 120 or GS 110*)
- GS 430 Geography of Transportation (3 crs.)**
This course will provide a spatial understanding of the role of transportation and interaction. It will provide an analysis of the importance of location relative to economic activities, development of distribution systems, flow analysis, effectiveness of distributional systems and the impact of transport systems on economic development. (*Prerequisite: MA 110, and EC 200 or GS 362*)
- GS 450 Geography of Agriculture and Food Production (3 crs.)**
A study of food producing capabilities of different climatic environments, technologies, and management systems throughout the world, via case study approach. (*Prerequisite: GE 100 or 120 or consent of the Instructor*)
- GS 451 Geography of Europe (3 crs.)**
The character of the natural and cultural environments of the geographic regions of Europe. (*Prerequisite: GE 100 or GS 110 or consent of the Instructor*)
- GS 452 Geography of Asia (3 crs.)**
The physical and cultural patterns of selected countries of Asia. (*Prerequisite: GE 100 or GS 110 or consent of the Instructor*)
- GS 453 Geography of Canada (3 crs.)**
The geography of environment, resources and population are examined in relation to history, economic, and regional land patterns of Canada. (*Prerequisite: GE 100 or GS 110 or consent of the Instructor*)
- GS 461 Geography of Africa (3 crs.)**
The physical and cultural features of the African continent with special reference to the emerged political and regional patterns. (*Prerequisite: GE 100 or 120 or GS 110*)
- GS 470 Historical Geography of New England (3 crs.)**
This course traces the evolution of the geographic patterns of settlement, land use, and cultural and economic development from the pre-European period to the present. (*Prerequisite: Consent of the Instructor*)
- GS 473 Political Geography (3 crs.)**
Variation of politically-organized areas and their relationship to each other. Political behavior from the viewpoint of ethology, i.e. territoriality and aggression. (*Prerequisite: Consent of the Instructor*)

Department of History

Chairperson: Professor Thomas Turner
Professors: William Cole, Gerald Doiron, Jordan Fiore,
Jane Herrick, Donald Keay, Dennis Lythgoe
Lucille O'Connell, Philip Silvia, Jr., Benjamin Spence
Associate Professors: David Culver, Peter Karavites,
Chester Nowak, Arthur Oien, Alfred Wolff, Jr.
Assistant Professors: John F. Myers, Jean Stonehouse

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS

The objectives of the department are to contribute to the general education program by offering history courses to all students; to prepare students planning to teach history and to offer advanced courses to those majoring in the elementary curriculum to enable them to enrich their teaching at that level; to enable students to do graduate or associated work in the field of history.

The department recommends that its majors select a minor or interdisciplinary program which will complement the major program. History majors electing Secondary Education are strongly urged to take elective courses in geography, political science, economics and the behavioral sciences in order to meet present employment expectations.

Only 6 hours of 100-level courses may be applied toward a history major or minor.

HISTORY MAJOR

Any two 100-level courses in sequence (If HI 123-124 are elected, an additional course in the period before 1500 must be taken);

HI 221-222, plus 9 additional credits in U.S. History; 9 credits in non-U.S. History; 6 additional credits from any area;

All majors must select one of the several senior seminars offered as part of the 36 hour requirement for the major;

Successful completion of a one-year sequence in a foreign language at the intermediate level, or its equivalent.

HISTORY MAJOR/ HIGH SCHOOL EDUCATION

History (Teacher of History 9-12)

Major courses:

Two sequential 100 level courses, HI 221, HI 222, one 300-400 level course from Area II — Ancient, one 300-400 level course from Area IV — European, three 300-400 level courses from Area V — United States, one course from Area VI — Regional, HI 492, one 300-400 level course from Area VIII — Relationship, or one course from among the following (ID 200, ID 210, ID 220, ID 420, SS 300).

Cognate courses: None

History (Teacher of Social Studies 9-12)

Major courses:

Two sequential 100 level courses, HI 221, HI 222, two 300-400 level courses in United States History, two 300-400 level courses in non-United States History, HI 492.

Cognate courses:

PO 272, PO 277 or PO 360, EC 200, EC 320, SO 202, GS 110, one elective course in Political Science or Geography as a Social Science, one regional Geography course in Geography as a Social Science, one course in Philosophy or Religion.

History

HISTORY MINOR

Eighteen hours including the freshmen and sophomore sequences. At least six credits must be in the 300 and 400-level.

GRADUATE PROGRAMS

MASTER OF ARTS

The Department of History offers a program leading to the degree of Master of Arts in History, which is designed to prepare qualified students for research, further graduate study and teaching. An undergraduate major in history, or its equivalent, is normally required for admission to this program. Applicants must have an interview with the Coordinator of the Program. No application will be considered unless this requirement has been met.

A thesis is optional in this M.A. program. Students who do not include a thesis in their program must complete course work in addition to the minimum credit requirements of the degree; for details contact the Chairperson of the Department.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisor and Program Planning" in the Graduate School section of this catalogue. History courses offered for the degree should be elected in accordance with the "Group" and "Area" distribution format outlined below. The comprehensive examination will be given in the "groups" and "areas" selected by the candidate. These exams will be given in the fall and spring only. In the Master of Arts program students should elect as one of their first courses HI 501 Seminar in Historical Methodology, unless their advisor agrees that they have met the requirement in an appropriate undergraduate course. (Students may substitute HI 398 or a directed study in historical methodology for HI 501 with the approval of their advisor.) At least one 500-level seminar is also required. Any student who does not complete the thesis in two semesters must continue to select HI 502 Research each semester until the thesis is completed.

The department's course offerings include the following which may not be taken for graduate credit: all courses numbered in the 100 and 200 levels, HI 498, HI 499.

MASTER OF ARTS IN TEACHING

The Department also offers a program leading to the degree of Master of Arts in Teaching with a concentration in history, which is designed primarily to meet the varied needs of graduate students who are currently teaching at the secondary-school level. Degree requirements include a minimum of 12 appropriate graduate credits in designated areas of professional study (consult the Graduate School section of this catalogue), and a minimum of 18 appropriate graduate credits in history (approved by the program advisor on the basis of the background, interests, and needs of the student), including at least one 500 level seminar.

All accepted students must enroll under the direction of their advisor in GS 501 Graduate Program Planning, which is described under "Graduate Advisors and Program Planning" in the Graduate School section of this catalogue. History courses offered for the degree should be elected in accordance with the "Group" and "Area" distribution format outlined below. The comprehensive examination will be given in the "groups" and "areas" selected by the candidate. These exams will be given in the fall and spring only.

The department also plays a major role in the MAT program in Social Sciences. For details, students should contact the Program Coordinator.

The department's course offerings include the following which may not be taken for graduate credit: all courses numbered in the 100 and 200 levels, HI 498, HI 499.

PROPOSED CAGS CONCENTRATION FOR HISTORY/ SOCIAL STUDIES TEACHERS

A CAGS in Behavioral Sciences concentration for history/social studies teachers is being developed jointly by the History Department and the Division of Behavioral Sciences. Designed primarily for students with a history background at the master's degree level, the proposed concentration would provide for additional specialization in history, as well as appropriate interdisciplinary study in the behavioral sciences.

History

GRADUATE PROGRAMS BY AREAS

Each student entering a graduate program in history will choose one of the four groups listed below as his major. Each student will choose two areas within the chosen major group, and one additional area from within one of the remaining groups. Students majoring in Group II, III, or IV must choose their additional area within the History of the United States.

Upon entering the program, students will fill out a departmental form in which they declare their choice of areas. Students may change their areas any time up to their comprehensive examination.

The graduate program in history is divided in four major Groups:

- I. United States and Canada
- II. Europe
- III. Latin America
- IV. Asia and Africa

Group I: United States and Canada

Areas:

- 1. Chronological period, 1607-1787
- 2. Chronological period, 1787-1877
- 3. Chronological period, 1877 to present
- 4. Regional and Topical

Students choosing the "Regional and Topical Area" can propose their own area for examination, in consultation with the advisor and with the approval of the Department's Graduate Committee.

- 5. Canada

Group II: Europe

Areas:

- 1. Ancient Greece and Rome
- 2. Middle Ages and Renaissance
- 3. Early Modern and Revolutionary Europe
- 4. 19th and 20th Century Europe
- 5. Russia and Eastern Europe

Group III: Latin America

Areas:

- 1. Pre-Columbian and Colonial Spanish America
- 2. National Period
- 3. Brazil

Group IV: Asia and Africa

Areas:

- 1. Ancient Middle East
- 2. Middle East since Mohammed
- 3. Colonial Africa
- 4. Modern Africa

History

COURSE OFFERINGS*

The object of the 100-level courses is to give a broad introduction to history at the college level. They should be taken in sequence. Courses that overlap in time periods may not be both taken for credit. Possible sequences include:

HI 111-112
HI 121-122-123-124
HI 111-123-124
HI 121-122-112

- HI 111 History of Western Civilization I (3 crs.)**
From earliest times to the establishment of absolute monarchy.
- HI 112 History of Western Civilization II (3 crs.)**
From the establishment of the absolute monarchy to the present.
- HI 121 World Civilization I: Ancient (3 crs.)**
Prehistoric man and the various ancient civilizations to the decline of the Roman empire in the West; Ancient Near East; Classical Greece and Rome; Far East; and the Western Hemisphere.
- HI 122 World Civilization II: Medieval (3 crs.)**
From the decline of the Roman Empire to the beginning of the Renaissance: Western Christian Civilization; Byzantine culture; Islam; other African and Asian peoples.
- HI 123 World Civilization III: Early Modern (3 crs.)**
From the Renaissance to the end of the Napoleonic Era: the rise of national states; the mutual impact of East and West.
- HI 124 World Civilization IV: Modern (3 crs.)**
From 1815 to the present: the zenith of European power and nation-building in Asia, Africa, and Latin America.
- HI 221 United States History and Constitutions to 1865 (3 crs.)**
Development of the nation from the age of exploration to the end of the Civil War.
- HI 222 United States History since 1865 (3 crs.)**
Continues the study begun in HI 221 down to the present.

300 and 400-level courses in history are designed primarily for juniors and seniors. As a minimum preparation, those taking upper-level courses in European, Asian, African, and Latin American history must have completed 3 credits in either Western Civilization or World Civilization. Those taking upper-level courses in U.S. or Canadian history must have completed either HI 221 or HI 222. Exceptions to these requirements must be approved by the Department.

- HI/RE 300 Hellenistic Religion (3 crs.)**
The course will examine the survival of Greek religion in the empire of Alexander the Great and his successors, and the interaction of the Greek religion with the religions of the Ancient Near East under the new conditions and circumstances created by Alexander's conquests.
- HI 301 The Ancient World: Near East (3 crs.)**
From prehistoric times through the Persian Empire.

*See page 68 for general information regarding course offerings

History

- HI 302** **Jews and Christians in the Ancient Roman World (3 crs.)**
The history of the Jews and Christians with emphasis on the relationships with the Roman authorities and people.
- HI 303** **Ancient Greece and the Hellenistic Age (3 crs.)**
An historical survey of Ancient Greece and a comprehensive study of the cultural contributions of the Greeks to western civilization.
- HI 304** **The Ancient World: Rome (3 crs.)**
From its beginnings to the barbarian invasions.
- HI 305** **Europe in the Middle Ages (3 crs.)**
From the fall of Rome to the Renaissance.
- HI 306** **The Renaissance and the Reformation (3 crs.)**
Western Europe from the decline of feudal institutions to the emergence of the modern state system, with emphasis on cultural and intellectual affairs.
- HI 309** **Nineteenth Century Europe (3 crs.)**
From the Napoleonic era to the eve of the First World War.
- HI 310** **Twentieth Century Europe (3 crs.)**
Particular focus on backgrounds, development, and effects of the two world wars.
- HI 311** **English History to 1603 (3 crs.)**
From Roman times to the accession of the Stuart dynasty.
- HI 313** **British History since 1603 (3 crs.)**
England and her empire to 1815 with stress on parallel developments in American history, including economic and social factors.
- HI 314** **British Empire and Commonwealth since 1815 (3 crs.)**
Political development to the present with emphasis on the rise and fall of the Second Empire.
- HI 315** **Louis XIV and the Age of Absolutism (3 crs.)**
A history of Europe from the end of the Thirty Years' War to the French Revolution with emphasis on the political, social, scientific, religious, literary, and artistic achievements during the period.
- HI 316** **The French Revolution and the Napoleonic Era (3 crs.)**
France from the Old Regime to the end of the First Empire.
- HI 317** **Modern France (3 crs.)**
From the Revolution of 1789 to the present.
- HI 318** **History of East-Central Europe since 1918 (3 crs.)**
The political, social, economic, cultural, and intellectual history of Austria, Hungary, Czechoslovakia, and Poland during the interwar period--and that of the Socialist Republics (Hungary, Czechoslovakia, Poland, and East Germany) from the Second World War to the present.
- HI 319** **Modern Russia to 1917 (3 crs.)**
Political, social, and economic factors in the history of Russia from the end of the fifteenth century to the Revolution.
- HI 320** **History of the U.S.S.R. (3 crs.)**
The political, social, intellectual, and diplomatic development of Russia.
- HI 321** **Modern German History (3 crs.)**
From the reign of Frederick the Great to the end of World War II.

History

- HI 322 History of Portugal (3 crs.)**
From the eleventh century to the dissolution of the Portuguese empire in the twentieth century.
- HI 323 Intellectual History of Modern Europe (3 crs.)**
From the Renaissance to the present.
- HI 324 History of the Middle East (3 crs.)**
From Mohammed to the present: The Arab Empire, the Ottoman Empire, and the roots of the Arab-Israeli dilemma.
- HI 326 The Arab-Israeli Conflict (3 crs.)**
Zionism and Arab nationalism from the nineteenth century to the present with emphasis on the root causes of the present conflict.
- HI 328 Modern European Imperialism (3 crs.)**
Africa and Asia considered as contrasting phases of European expansion in the nineteenth and twentieth centuries.
- HI 329 Africa since 1800 (3 crs.)**
The impact of Islamic and European cultures on the peoples of Africa; creation of colonial empires.
- HI 333 Spanish America: The Colonial Period (3 crs.)**
Indigenous peoples of the area; exploration and conquest; institutional development of the empire to the revolts against Spain in the nineteenth century.
- HI 334 Spanish America: The National Period (3 crs.)**
From the revolutions against Spain to the present. Concentration on Mexico and two or three other states.
- HI 335 Canadian History to Confederation (3 crs.)**
The land, the native peoples, exploration, patterns of settlement of the French through the Conquest to the development of English institutions.
- HI 336 Canadian History since Confederation (3 crs.)**
The evolution of an independent Canada from the time of the Confederation.
- HI 337 History of Canadian-American Relations (3 crs.)**
An analysis of the Canadian efforts to remain friendly with the giant to the south while protecting its political, economic and cultural integrity.
- HI 342 Topics in Recent American History (3 crs.)**
The isolationism and boom of the 1920's, the New Deal, World War II, and the post-war period.
- HI 343 History of American Indians (3 crs.)**
The history of American Indians to the twentieth century, emphasizing the role of economic, political, and military conflict with the people and government of the United States.
- HI 345 American Immigration and Ethnicity (3 crs.)**
Patterns of migration to the United States with particular emphasis on the nineteenth and twentieth centuries.
- HI 346 American Labor History (3 crs.)**
The pre-industry and industrial periods. Emphasis on the reciprocal relations of workingmen, Negroes, immigrants, urbanization, and industrialization.
- HI 347 History of the American City (3 crs.)**
Political, architectural, economic, social, cultural, and population factors in the growth and development of American cities since colonial times.
- HI 348 Afro-American History (3 crs.)**
From the colonial period through the present.

History

- HI 349 Women in American History (3 crs.)**
A history of American women from the colonial period to the present time.
- HI 351 The American West (3 crs.)**
The westward movement, emphasizing the distinctive character of that region in its economic, social, political, and intellectual life.
- HI 352 The American South (3 crs.)**
Sectionalism; its causes and consequences; factors which made the South distinctive; emphasis on race relations, the Civil War and Reconstruction, agrarianism, industrialization.
- HI 359 New England Textile Communities: Social and Economic History (3 crs.)**
Social history emphasizing economic, ethnic, labor, political and religious factors during a period when the New England region achieved ascendancy as the nation's foremost cotton textile area.
- HI 360 American Environmental History (3 crs.)**
Man's attitude toward, interaction with, and adaptations to the physical environment of the United States.
- HI 361 American Economic History (3 crs.)**
Economic development of the United States with particular emphasis on the period of industrial development.
- HI 362 Constitutional History of the United States (3 crs.)**
Historical development of the U.S. Constitution.
- HI 363 Social and Intellectual History of the U.S. to 1870 (3 crs.)**
Economic, social, and cultural development to the end of the Civil War.
- HI 365 Social and Intellectual History of the U.S. 1870-1914 (3 crs.)**
The economic, social, and cultural development from 1870 to the eve of the First World War, with emphasis on the transformation from an agricultural to an industrial society.
- HI 366 Social and Intellectual History of the U.S. since 1914 (3 crs.)**
Economic, social, and cultural developments since 1914, with emphasis on the transformation of American life through such forces as technology, population trends, and the mass-production and mass-consumption economy.
- HI 368 American Political History (3 crs.)**
American History in political perspective: special emphasis on parties, primaries, campaigns, elections; the Presidency; personality in politics; machine politics; political institutions; corruption from U.S. Grant to Watergate.
- HI 367 Sport in American Life (3 crs.)**
The rise of sport in American society, stressing its cultural, economic, and social impact since the Civil War.
(Prerequisite: HI 221 or HI 222)
- HI 371 United States Foreign Relations to 1900 (3 crs.)**
From the American Revolution to 1900.
- HI 372 United States Foreign Relations since 1900 (3 crs.)**
- HI 381 United States History: The Colonial Period 1607-1763 (3 crs.)**
The settlement and growth of the English colonies of America; England's colonial policies; economic and institutional development in the provincial period; the wars with the Indians, and the rivalry with the French in America.
- HI 382 The American Revolution 1763-1787 (3 crs.)**
Background and causes of the American Revolution, the military, social, political, and diplomatic aspects of the Revolution. The government under the Articles of Confederation, and the problems engendered by the attainment of political independence.
- HI 383 United States History: The Early National Period (3 crs.)**
The course of United States History from the establishment of the republic to the election of Andrew Jackson.

History

- HI 384 Jacksonian Democracy and the Coming of the Civil War (3 crs.)**
The election of Andrew Jackson and the "rise of the common man," the Whig-Democrat rivalry, the Texas question, Manifest Destiny, the rise of abolitionism, the events leading to the outbreak of the Civil War.
- HI 385 United States History: The Civil War (3 crs.)**
Background and causes of the Civil War, the military and naval aspects. Civil War music, art, and literature, diplomacy of the Civil War, the home front in the war, the plans for reconstruction, and military reconstruction.
- HI 386 United States History: 1865-1900 (3 crs.)**
Emphasis on Reconstruction, Populism and Bryan, The Gilded Age and Cleveland, McKinley and imperialism.
- HI 387 United States History: Progressive Era (3 crs.)**
The rise of the Progressive movement in American history to the early 1920's as reflected in politics, government, and the social and intellectual life of the era.
- HI 388 United States History from World War I (3 crs.)**
Development of the modern America through the isolationism and boom of the 1920's, the Great Depression, the New Deal, World War II, and the role of the United States in the post-war world.
- HI 391 History of China (3 crs.)**
From prehistoric times to the present with particular emphasis on intellectual and cultural development.
- HI 392 History of Japan (3 crs.)**
From prehistoric times to the present with emphasis on the development of social, political and economic institutions.
- HI 393 South Asia: The Modern Period (3 crs.)**
Emphasis on colonialism and nationalism in the Indian subcontinent and Vietnam.
- HI 394 China under Communism (3 crs.)**
The origins of the Chinese Communist Party and the political, social, economic, and intellectual changes fostered by the party since 1949.
- HI 395 World War II (3 crs.)**
A study of the global conflict with emphasis on military diplomatic, and political events.
- HI 397 Historiography (3 crs.)**
Writings of major historians; evaluation through professional journals and book reviews. Enrollment limited to fifteen. Students are expected to elect HI 398. (*Prerequisite: Consent of the department chairperson and the Instructor*)
- HI 398 Study and Writing of History (3 crs.)**
The techniques of historical research and preparation of papers requiring such techniques; analysis and evaluation of source materials. (*Prerequisite: Consent of the Instructor*)
- HI 400 Topics in Non-U.S. History (2-3 crs.)**
Varied topics such as the Crusades; South Asia; Ancient Egypt. Meets four hours weekly for one quarter.
- HI 440 Topics in U.S. History (2-3 crs.)**
Varied topics such as the French in New England; History of Boston; American assassinations.
- HI 461 History of Massachusetts (3 crs.)**
From the days of the Pilgrims and Puritans to the present. In the modern period, emphasis is on social, economic and constitutional history.
- HI 464 Contemporary Affairs (3 crs.)**
National and international problems, using magazines, newspapers, telecasts, and recent books. Political, economic, social, and scientific developments. Enrollment limited to fifteen.

History

- HI 492 Senior Seminar in History (3 crs.)**
Each senior will elect a seminar. A research paper is required. The number of students in each is limited. (*Prerequisite: Consent of the department chairperson and the Instructor*)
- HI 497 Historical Museum Management (2 crs.)**
Four periods weekly for one quarter.
- HI 498 Internship in History (3-6 crs.)**
Intended to expose student participants to historical artifacts and primary source materials. Host agencies may include museums and public and private historical organizations. (*Prerequisite: Consent of the Department*)
- HI 499 Directed Study in History (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits or with an internship program —combined credit maximum, 6. (*Prerequisite: Consent of the Department*)
- HI 501 Seminar in Historical Methodology (3 crs.)**
The basic methods of historical research and historical writing and the proper use of primary and secondary sources, bibliography, documentation, and annotation. (*Prerequisite: Acceptance in a master's degree program at Bridgewater State College*)
- HI 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- HI 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- HI 505 History of the American Sciences (3 crs.)**
The role of science, leading American scientists, and the formation of major scientific organizations and government scientific agencies in American history.
- HI 521 Pilgrim Heritage Seminar (3 crs.)**
The Pilgrims in their economic, social, and religious setting. Admission only with the consent of the Instructor.
- HI 540 Topical Seminar: U.S. and Canada (3 crs.)**
This course will stress reading and research in a limited field. Topics will vary each time the course is given and will be announced in the horarium. Limited enrollment. (*Prerequisite: Permission of the Instructor*)
- HI 550 Topical Seminar: Europe (3 crs.)**
This course will stress reading and research in a limited field. Topics will vary each time the course is given and will be announced in the horarium. Limited enrollment. (*Prerequisite: Two appropriate European history courses and permission of the Instructor*)
- HI 560 Topical Seminar: Latin America (3 crs.)**
This course will stress reading and research in a limited field. Topics will vary each time the course is given and will be announced in the horarium. Limited enrollment. (*Prerequisite: HI 333 and HI 334 or equivalents*)
- HI 570 Topical Seminar: Africa (3 crs.)**
This course will stress reading and research in a limited field. Topics will vary each time the course is given and will be announced in the horarium. Limited enrollment. (*Prerequisite: HI 329 or equivalent*)

The following courses also carry credit in history:

ID 200 Introduction to Canadian Studies
ID 220 Introduction to American Studies
ID 420 American Studies Seminar
SS 300 Geography and History of Mexico

Department of Political Science and Economics

Chairperson: Associate Professor Guy Clifford
Professors: Walter Adamson, Robert Larson
Associate Professors: Kathleen Ittig, Michael Kryzanek
Assistant Professor: Stanley Antoniotti
Instructor: Pauline Harrington

POLITICAL SCIENCE

UNDERGRADUATE PROGRAMS

BACHELOR OF ARTS/BACHELOR OF SCIENCE

The program of study for political science majors is designed to give students an understanding of the political and governmental structure in their own country and in other parts of the world, and to develop their interest in contemporary public affairs and governmental problems. The political science major aims to provide a foundation for the study of law, for graduate work in political science or public administration with a view toward teaching or government service, and for work in international relations.

The political science major with a concentration in public administration is designed for students who look forward to careers in the public service after graduation, and for those who wish to pursue graduate studies, particularly studies toward a master's degree in public administration.

The political science major with a concentration in international affairs is designed for those students who wish a general background in, and understanding of, this field for purposes of cultural enhancement and/or career orientation, looking towards further study leading to service in the international field as a professional opportunity.

INTERNSHIP PROGRAM

An Internship Program is available to all students in Political Science. It is required of those in the Public Administration concentration; is a designated elective for International Affairs; and is a recommended elective for all others, including the minor. A diversity of assignments are available. Assignment to the Internship Program is on the basis of application and subsequent selection. Students may present their applications at any time before October 15 for the Spring semester and before February 15 for the Fall semester. Summer appointments are made only in exceptional cases. To be eligible for an Internship a student must have senior status; acceptably completed PO 379 Introduction to Public Administration; and have the approval of the Coordinator. It is recommended that those students with an interest in the Program confer with the Internship Coordinator.

POLITICAL SCIENCE MAJOR

PO 272, PO 277, PO 371, PO 372, PO 373, PO 374, PO 375, PO 473, plus 3 additional 300 or 400-level courses;
EC 200, EC 320;
HI 111-112, HI 221-222, HI 314 and one additional history course;
A one-year sequence of foreign language study at the intermediate level, or its equivalent.

Political Science & Economics

PUBLIC ADMINISTRATION CONCENTRATION

PO 272, PO 277, PO 360, PO 372, PO 373, PO 374, PO 379, PO 389, PO 390, PO 498, and one PO 300 or 400 level elective; HI 111-112, HI 221-222, HI 314;
AC 240-241, CC 200, EN 201, MA 110 or CS 100, and EC 200;
A one-year sequence of foreign language study at the intermediate level, or its equivalent.

INTERNATIONAL AFFAIRS CONCENTRATION

PO 271, PO 272, PO 360, PO 371, PO 379, PO 384, PO 475 or PO 498, plus four additional political science courses; HI 111-112, HI 221-222, HI 314;
CC 200, EC 200, EC 320, EN 201, GS 261 or 262, MA 110 or CS 100
A one-year sequence of foreign language study at the intermediate level, or its equivalent.

ECONOMICS MINOR

Students minoring in Economics must take seven three-credit courses, four of which are required (EC 200, 210, 300, 310). The other three courses must be at the 300 or 400 level.

POLITICAL SCIENCE MINOR

PO 272, 277, 360, 371, 379;
PO 382 or 386 or 387;
PO 271 or 373 or 374.

GRADUATE PROGRAMS

The Department of Political Science and Economics does not offer a program at the master's degree level at this time. Political Science courses may be taken, with faculty advisor approval, in a program leading to the degree of Master of Arts in Teaching with a concentration in the social sciences. Detailed information regarding this degree may be found in the Graduate School section of this catalogue.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: all courses below the 300 level, PO 498, PO 499.

ECONOMICS

UNDERGRADUATE PROGRAMS

The department offers the courses listed below for undergraduates majoring in other areas who wish to include economics electives in their program.

GRADUATE PROGRAMS

The Department of Political Science and Economics does not offer a program at the master's degree level in Economics. Economics courses may be taken, with faculty advisor approval, in a program leading to the degree of Master of Arts in Teaching with a concentration in social sciences. Detailed information regarding this degree may be found in the Graduate School section of this catalogue as well as under the Division of Social Sciences.

The departmental offerings listed below include the following courses which may not be taken for graduate credit: EC 200, EC 499.

Political Science & Economics

COURSE OFFERINGS*

POLITICAL SCIENCE

- PO 100 Introduction to Politics (3 crs.)**
An introduction to the world of politics with emphasis on a presentation of the essential concepts, philosophies, processes and problems of politics in contemporary society.
- PO 271 Western Political Thought — Plato to the Present (3 crs.)**
Development of political ideas from ancient times to the modern era.
- PO 272 American Government: The Federal System (3 crs.)**
The constitutional authority, organization, activities, and political processes of the national government.
- PO 273 United States and Massachusetts Constitutions (1 cr.)**
Structure of government and rights and responsibilities according to Federal and Commonwealth constitutions.
- PO 277 American Government: State and Local Government (3 crs.)**
State government and politics with emphasis on Massachusetts affairs. (*Prerequisite: PO 272 or consent of the Instructor*)
- PO 360 International Relations (3 crs.)**
An introduction to modern world politics, the nation-state system and the patterns and processes involved in relations within the international community. (*Prerequisite: PO 272 or consent of the Instructor*)
- PO 371 Comparative Government (3 crs.)**
Political behavior and government systems in Great Britain, France, the Soviet Union, etc. (*Prerequisite: PO 272, PO 277*)
- PO 372 Legislative Process and Procedure (3 crs.)**
The role of legislatures in modern American government, federal and state; the relationships of the voter and of apportionment to law making; the two-party system and its impact on the law-making process; the committee system and seniority, and constitutional limitations on legislatures. (*Prerequisite: PO 272, PO 277*)
- PO 373 Political Theory — Ancient and Medieval (3 crs.)**
Western political thought from Plato to Sir Thomas More. Emphasis upon the basic concepts and persistent questions of political theory and their relevance to contemporary problems through systematic analysis of major works. May not be taken if credit already received for PO 271. (*Prerequisite: PO 272*)
- PO 374 Political Thought: Modern and Contemporary (3 crs.)**
The ideas of major political thinkers in the era of the modern nation-state. May not be taken if credit already received for PO 271. (*Prerequisite: PO 272*)
- PO 375 Political Parties (3 crs.)**
The historical development of the American party system, and contemporary aspects of its functioning, at the national, state, and local level. (*Prerequisite: PO 272, PO 277*)
- PO 376 Municipal Government (3 crs.)**
Study of selected problems of structure, organization, and powers of local government; intergovernmental relationships; administrative and personnel management; special emphasis on local government in Massachusetts. (*Prerequisite: PO 272, PO 277*)

*See page 68 for general information regarding course offerings

Political Science & Economics

- PO 379 Introduction to Public Administration (3 crs.)**
The relationship of the administrative branch of government to other branches in the making and implementation of public policy; theories of government organization for efficient administration; problems of budgeting, personnel, merit systems, type of agency organization, popular control over the bureaucracy. (*Prerequisite: PO 272, PO 277*)
- PO 381 United States — Latin American Relations (3 crs.)**
The evolution and current status of the political, economic and strategic relationship between the United States and the Latin American nations. (*Prerequisite: PO 272, PO 360*)
- PO 382 Latin American Government and Politics (3 crs.)**
A survey of the current governing structures and the general political conditions in the major Latin American nations. (*Prerequisite: PO 272, PO 371*)
- PO 383 Comparative Political Systems (3 crs.)**
An advanced investigation and comparison of the primary political institutions and processes found in a number of contemporary national systems. Special emphasis to be placed on the role and status of constitutions, interest groups, political parties, policy-making bodies and other areas. (*Prerequisite: PO 272, PO 371*)
- PO 384 United States Foreign Policy Since World War II (3 crs.)**
The study of the goals, policies, structures and procedures that have formed and guided the relations of the United States with other world powers since the conclusion of World War II. (*Prerequisite: Junior status and permission of the Instructor*)
- PO 385 Law for the Layman (3 crs.)**
A non-technical discussion of legal topics, including the relationship of law to social and humanitarian problems; open to majors and non-majors.
- PO 386 Canadian Government (3 crs.)**
The origins and development of the government of Canada from Confederation; the transition from colonial to dominion status; the Statute of Westminster, and independence. Federal government organization, relations with the British Commonwealth. (*Prerequisite: PO 272, and PO 371 or permission of the Instructor*)
- PO 387 Government and Politics of Africa (3 crs.)**
An introduction to the organization and processes of African politics centering on the political evolution of contemporary Africa in general but with specific attention to selected nations as appropriate. (*Prerequisite: PO 272 and PO 371, or consent of the Instructor*)
- PO 389 Public Personnel Administration (3 crs.)**
Employee relations in the public service; recruitment, testing, compensation, training, classification, and promotions of public servants. (*Prerequisite: PO 379 or consent of the Instructor*)
- PO 390 Public Finance (3 crs.)**
The role of government in a market economy; the role of taxation in a market economy; principles of taxation; problems of budgeting, government expenditure and debt, and economic growth. (*Prerequisite: PO 379 or consent of the Instructor*)
- PO 395 Administrative Law and Regulation (3 crs.)**
The legal and regulatory systems of federal, state and local governments will be analyzed as to their relationship to policy implementation and administration. Emphasis will be placed on charters, ordinances, legislative power and administrative control in areas such as finance, personnel, labor, land use, licensing and education. (*Prerequisite: PO 379 or consent of the Instructor*)
- PO 399 Collective Bargaining in the Public Sector (3 crs.)**
An in-depth analysis of the issues behind collective bargaining, the ramifications of contract negotiations and the techniques and tactics which are used by both labor and management. Emphasis on analysis of contracts, legislation and use of negotiation teams. (*Prerequisite: PO 389 or consent of the Instructor*)

Political Science & Economics

- PO 461 Contemporary International Relations (2 or 3 crs.)**
Application of the techniques of analysis, simulation and forecasting to international relations situations, problems and current issues. (*Prerequisite: PO 360 or consent of the Instructor*)
- PO 463 Global Politics (3 crs.)**
A study of the challenges--forces/actors/issues--which are contributing to change in the existent nation-state system and of the portent for a transformation in the future global community. (*Prerequisite: PO 360 and senior status or consent of the Instructor*)
- PO 472 American Constitutional Development (3 crs.)**
Principles and concepts of the U.S. Constitution, as revealed in leading court decisions. Judicial review, federalism, separation of powers, implied powers, due process of law, equal protection, the contract clause, etc. (*Prerequisite: PO 272, PO 277, PO 374*)
- PO 473 International Law and Organization (3 crs.)**
The evolution of international law and organization from early beginnings to the United Nations systems; the principles of international law and organization, their integration, and the effect of international politics thereon; the theoretical and practical aspects of the international legal process; the structure, functions and procedures of the United Nations, etc. (*Prerequisite: Permission of the Instructor*)
- PO 475 Senior Seminar in Political Science (3 crs.)**
The undertaking of independent study, and a research project presented in oral and written form. (*Prerequisite: Admission is subject to the consent of the department chairperson and the Instructor*)
- PO 479 Public Policy (3 crs.)**
A systematic study of theory and practice in the making and the execution of public policy including the factors of public demand on the political system; decision making in the public sector; tools and techniques for implementation and evaluation; and the import for future planning. (*Prerequisite: PO 379*)
- PO 488 Politics and Development in the Third World (3 crs.)**
A survey of the political dynamics of development in the Third World with special emphasis on the dominant theories of development, current critical issues in the Third World, internal and external forces affecting Third World countries and the policy directions taken by developing nations. (*Prerequisite: PO 360 and PO 371 or consent of the Instructor*)
- PO 498 Internship in Political Science (3-15 crs.)**
A non-classroom experience intended to complement the academic preparation of a limited number of juniors and seniors majoring in political science. Placements are in areas such as federal, state, city, and town governments and private interest groups. (*Prerequisite: Consent of the department chairperson*)
- PO 499 Directed Study in Political Science (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the department chairperson*)
- PO 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- PO 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- PO 510 Graduate Seminar in American Politics (3 crs.)**
An in-depth study of current issues, problems and trends in American politics. (*Prerequisite: Substantial background in political science and consent of the Instructor*)
- PO 520 Graduate Seminar in International Relations (3 crs.)**
An in-depth study of current issues, problems and trends in international relations. (*Prerequisite: Substantial background in political science and consent of the Instructor*)

Political Science & Economics

- PO 530 Graduate Seminar in Comparative Politics (3 crs.)**
An in-depth study of current issues, problems and trends in comparative politics with special emphasis on the post-industrial state. *(Prerequisite: Substantial background in political science and consent of the Instructor)*
- PO 540 Graduate Seminar in Current Topics of Public Administration (3 crs.)**
An advanced approach to recent developments in public administration, public policy and human resource management. *(Prerequisite: Substantial background in political science and consent of the Instructor)*
- PO 550 Graduate Seminar in Massachusetts State Government (3 crs.)**
A detailed survey of the current state of the Commonwealth with particular emphasis on key public policy areas. *(Prerequisite: Substantial background in political science and consent of the Instructor)*
- PO 560 Graduate Seminar on the American Presidency (3 crs.)**
A detailed examination of the current conditions of the American presidency. *(Prerequisite: Substantial background in political science and consent of the Instructor)*

ECONOMICS

- EC 200 Economic Principles and Problems (3 crs.)**
A discussion of the basic principles of micro and macro economics. Emphasis is placed on the application of theory to solving the problems of the free enterprise system.
- EC 210 Quantitative Analysis for Economics (3 crs.)**
Quantitative analysis discusses the following subjects: data collection and presentation. Measures of central tendency and dispersion, probability, sampling, hypothesis testing, and regression, and correlation analysis. *(Prerequisite: MA 103-104; EC 200 or consent of the Instructor)*
- EC 300 Intermediate Micro Economic Theory and Policy (3 crs.)**
The theory of consumer behavior and demand, production and cost; the firm and market organization are discussed with emphasis placed on practical applications. *(Prerequisite: EC 200 or permission of the Instructor)*
- EC 310 Intermediate Macro Economic Theory (3 crs.)**
Keynesian, post Keynesian and Monetary models of the economy are used in detail. Emphasis is placed on the application of theory to all Macro-economic problems. *(Prerequisite: EC 200 or consent of the Instructor)*
- EC 315 Money and Banking (3 crs.)**
The roles and functions of money and the banking system are discussed. Various theories and policies are discussed and their influence on the state of the economy. *(Prerequisite: EC 200 or consent of the Instructor)*
- EC 320 Comparative Economic Systems (3 crs.)**
A study of philosophical and structural foundations of capitalism and democratic socialism. Emphasis is placed on a comparison of the American economy to the economies of other countries.
- EC 321 International Economics (3 crs.)**
A study of pure trade theory and its application to solving policy problems. Topics include Balance of Trade, Balance of Payments and Monetary Systems. *(Prerequisite: EC 200 or consent of the Instructor)*
- EC 400 History of Economic Thought (3 crs.)**
The writings of the major economic thinkers from Ancient Greece to modern times will be covered. Included will be discussions of the works of Plato, Adam Smith, Marshall, Keynes and others. *(Prerequisite: EC 200, EC 300, EC 315, and consent of the Instructor)*
- EC 410 Mathematical Economics I (3 crs.)**
The use of calculus and other mathematical tools in comparative static analysis and the solving of optimization problems in economics. *(Prerequisite: MA 103/104, MA 223, EC 200 or consent of the Instructor)*

Political Science & Economics

- EC 411 Mathematical Economics II (3 crs.)**
A continuation of Mathematical Economics I. Dynamic analysis using the tools of integral calculus, differential equations and difference equation; some linear programming and game theory are discussed. (*Prerequisite: EC 410*)
- EC 420 Econometrics I (3 crs.)**
A discussion of the motive of econometrics, the two variable linear model, the general linear model, the generalized least squares estimator and auto-correlation. (*Prerequisite: MA 103-104, MA 223 or EC 410 and EC 411; EC 200 or consent of the Instructor*)
- EC 421 Econometrics II (3 crs.)**
A continuation of Econometrics I. This course discusses stochastic regressors, instrumental variables, errors in variables, lagged variables and simultaneous equation methods. (*Prerequisite: EC 420*)
- EC 430 Consumer Economics (3 crs.)**
A conceptual and systematic treatment of the theory and practical application of consumer economics. An analysis of the interactions among consumer decision making, business practices and the free market economy. The complex roles of the federal, state and local governments in consumer protection are examined. (*Prerequisite: EC 200 or consent of the Instructor*)
- EC 499 Directed Study in Economics (1-3 crs.)**
Open to juniors and seniors who have demonstrated critical and analytical abilities in their studies and who wish to pursue a project independently. May be taken twice for a maximum of six credits. (*Prerequisite: Consent of the Department*)
- EC 502 Research (credit to be arranged)**
Original research undertaken by the graduate student in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- EC 503 Directed Study (credit to be arranged)**
Designed for the graduate student who desires to study selected topics in his field. For details, consult the paragraph entitled "Independent Study" in the Graduate School section of this catalogue.
- EC 510 Graduate Seminar in Domestic Economic Problems (3 crs.)**
Group discussion and individual research on problems of the American economy. (*Prerequisite: Consent of the Instructor*)
- EC 520 Graduate Seminar in International Economic Problems (3 crs.)**
Group discussion and individual research on the problems of the world economy. (*Prerequisite: Consent of the Instructor*)
- EC 531 Economics for Elementary Teachers (3 crs.)**
The development of economic programs and units for the elementary student in an area of interest, from materials and sources introduced in the course. (*Prerequisite: A bachelor's degree and some background in Elementary Education*)
- EC 532 Economics for Secondary Teachers (3 crs.)**
The development of economic programs and units for the secondary student in an area of interest from materials and sources introduced in the course. (*Prerequisite: A bachelor's degree and some background in Education*)



Political Science students in the 1984 Heritage Day Parade



The Student Government Association, 1923

Undergraduate, Multidisciplinary & Pre-Professional Programs

AMERICAN STUDIES MINOR

Designed to complement the student's major, this minor program examines the development of American society and culture from several perspectives. It features a study of the United States through a combination of relevant courses in a variety of academic areas: history, literature, art and architecture, philosophy, religion, political science and others. Through its multidisciplinary focus, the minor encourages an integrated and inclusive sense of the American experience.

The area around Bridgewater is rich in library and museum resources for American Studies. In addition to the holdings of Boston-area colleges and universities, there are the collections of the Massachusetts Historical Society, the Pilgrim Museum, Plimouth Plantation, the Whaling Museum in New Bedford, the Brockton Art Center, the Boston and Providence Athenaeums, the John Carter Brown Library and the Harris Collection at Brown University. Bridgewater itself has the new Microbook Library of American Civilization and the PCMI humanities collection.

A student wishing to pursue a minor in American Studies will ordinarily be assigned an advisor from the American Studies Committee, and will be expected to take the following sequence of courses in the sophomore, junior and senior years:

ID 220

Introduction to American Studies (3 crs.)

Sophomores should enroll in this interdisciplinary course which is the initial course for the minor in American Studies. The course aims to examine from several perspectives one problem or period in the American experience. The topic, to be announced before registration, changes from year to year. Disciplines involved include: English, history, art, philosophy, political science and others.

ID 420

American Studies Seminar (3 crs.)

Interdisciplinary topics, which change from year to year, will be developed in a small group, seminar setting. Juniors and seniors in the program will enroll in this seminar twice, studying two different topics. Total of 6 hours.

ELECTIVE COURSES: In consultation with an American Studies advisor, the student will choose a group of at least FOUR (4) additional courses in fields related to the program. Most likely these courses will be spread over the junior and senior years. At least TWO (2) of these additional courses must be chosen from disciplines outside the student's major.

For further information, interested students should contact Professors Charles Fanning or Joseph Yokelson of the English Department.

Undergraduate, Multidisciplinary & Pre-Professional Programs

CANADIAN STUDIES MINOR

The minor has been developed as an area studies in response to faculty, student and regional interest. The national origins of a large portion of the population of Southeastern Massachusetts reflects strong Canadian ties from both the French and English communities.

The program is designed to supplement and give a multi-cultural dimension to one's major by an in-depth study of our northern neighbor. The study is presented in the following academic areas: history, literature (English and French), geography, music, education and political science.

Students may enter the Canadian Studies minor during the sophomore or junior years and will be assigned an advisor in their major fields, usually a member of the College Council for Canadian Studies.

ID 200

An Introduction to Canadian Studies (3 crs.)

An interdisciplinary course which acts as the initial course for the general student and for those wishing to pursue a track in Canadian Studies. The following areas are included: anthropology, art, economics, education, English, French, geography, government, history, music, religion, sociology and theatre. May be repeated for credit.

In addition to **ID 200 , An Introduction to Canadian Studies** , students in the program should select courses from those listed below.

- I. Three courses with one from each area:
 1. Area of literature
 - EN 283 Major Canadian Writers in English I
 - EN 284 Major Canadian Writers in English II
 - LF 261 Introduction to the Civilization and Language of French Canada
 2. Area of history
 - HI 335 Canadian History to Confederation
 - HI 336 Canadian History since Confederation
 3. Area of geography or political science
 - GS 453 Geography of Canada
 - PO 386 Government of Canada
- II. Two additional courses selected from the following list:
 - EN 384 Modern Canadian Fiction in English
 - LF 261 Introduction to the Civilization and Language of French Canada
 - GS 453 Geography of Canada
 - HI 335 Canadian History to Confederation
 - PO 386 Government of Canada
 - MU 368 Folk Music of Canada
 - ED 384 Canadian Education Seminar
- III. One additional course may be selected from courses in Group III or from the following:
 - EN 384 Modern Canadian Fiction in English
 - EN 385 Canadian Poetry in English
 - HI 337 History of Canadian-American Relations
 - LF 211 Twentieth-Century French Canadian Writers
 - LF 222 Introduction to French-Canadian Literature

Total of 21 credit hours.

Students in the minor are encouraged to have some familiarity with French as their language.

For further details contact Professor John Myers of the History Department.

Undergraduate, Multidisciplinary & Pre-Professional Programs

CHEMISTRY- GEOLOGY MAJOR

A major in Chemistry-Geology is offered jointly by the Department of Chemical Sciences and the Department of Earth Sciences and Geography. This program is designed to prepare students for graduate school and professional employment in geo-chemistry and geology. Careers in these fields may involve petroleum, mineral and groundwater exploration, or research in geochronology, mineralogy, crystallography and oceanography. This major is particularly suited to students interested in chemical or geological oceanography. The program is flexible in that it allows the student to specialize in a variety of areas by suitable choice of electives.

Chemistry-Geology majors are required to take the following courses: CH 141-142 (or CH 131-132); ES 100, 101, 372. In addition to the above requirements, majors must elect a minimum of two additional semesters of chemistry, two semesters of physics, and two semesters of mathematics. In addition to these electives the student must elect a minimum of six hours of chemistry or earth sciences or mathematics or physics which have been approved by the student's advisor.

The Chemistry-Geology major at Bridgewater State College is recognized by the New England Student Regional Program as an undergraduate four-year degree opportunity for residents of New England. Students who are legal residents of Connecticut, Maine, New Hampshire, Rhode Island, and Vermont and are accepted for study in this major will pay only the in-state tuition rate.

LINGUISTICS MINOR

The linguistics minor is open to all students, but it is especially valuable as a support to majors in anthropology, communication arts and sciences, early childhood education, elementary education, special education, English, foreign languages, philosophy, and psychology.

A minor in linguistics may be earned by selecting eighteen credits from the courses listed below. EN 323, Introduction to Linguistics, is required and should be taken as early in the student's program as possible. Also, students must reach an intermediate competency in a foreign language or take FL 300, Languages of the World.

Psycho-Socio Linguistics

- CC 363 Interpreting Communicative Behavior
- CC 450 Communicative Theory
- CD 442 Dactylology (Sign Language)

General Linguistics

- EN 324 Linguistic History of the English Language
- EN 320 Chaucer
- EN 430 Comparative Grammar
- EN 435 Semantics
- LF 201 French Literature of the Middle Ages
- LF 381 Applied French Linguistics and Phonetics
- LS 381 The Middle Ages I
- PL 405 Philosophy of Language
- EN 440 Topics in Linguistics
- FL 300 Languages of the World

Applied Linguistics

- CD 291 Phonetics
- CD 292 Language Acquisition and Development
- HU 330 English as a Second Language
- PL 240 Rational Thinking

For further details contact Dr. Clifford Wood, Chairperson, Department of English.

Undergraduate, Multidisciplinary & Pre-Professional Programs

OCEANOGRAPHY

The program in oceanography is offered as a cooperative effort of all departments within the Division of Natural Sciences and Mathematics, with the assistance of the staff and facilities of the Woods Hole Oceanographic Institute. This program is designed to prepare students for graduate school or professional employment in oceanography. Bridgewater State College participates in the annual summer Marine Science Program at the Massachusetts Maritime Academy. Summer programs at the Academy allow the student to participate in course work in specialized areas of oceanography, to engage in research and to gain experience in actual field techniques onboard ship. Participation in this program provides the student with the necessary foundation for either further academic work in oceanography or employment in a variety of areas.

Most graduate schools of oceanography require an undergraduate major in biology, chemistry, earth sciences, or physics. All students interested in an oceanography program should major in one of these disciplines. Graduate schools of oceanography expect students to include the following courses in their undergraduate programs: Calculus I and II, Inorganic Chemistry and Qualitative Analysis or General Chemistry, General Physics or Elements of Physics. Quantitative Analysis, General Botany, General Zoology, Physical Geology, and Introduction to Oceanography I and II.

These courses, together with one of the majors indicated above, provide the basic foundation for further study in one of the four principle branches of oceanography, i.e.: biological oceanography, chemical oceanography, geological oceanography, and physical oceanography. Additional courses in related areas may be selected by the student with the approval of his major advisor. A student who is interested in oceanography should consult both his major advisor and one of the oceanography advisors before registering for courses in his freshman year or as soon as possible thereafter. Oceanography advisors are: Dr. Robert Boutilier (Earth Sciences); Dr. Henry Daley (Chemistry); Dr. John Jahoda (Biology).

PRE-ENGINEERING PRE-LAW PRE-MEDICAL PRE-DENTAL PRE-VETERINARY

Pre-professional training for students planning to enter engineering, law, medical, dental, or veterinary schools is provided by Bridgewater State College. Such professional schools generally prefer applicants with a strong liberal arts background.

Engineering schools expect prospective students to have demonstrated competency in areas such as mathematics, physics, chemistry, and computer science. Law schools expect applicants to have preparation in areas such as history, political science, economics, plus courses in composition. Students considering medical, dental, or veterinary school are expected to have proficiency in writing and skill in a wide range of laboratory techniques. Courses in biology, mathematics, and chemistry ordinarily are required. While some of these schools do not require a specific undergraduate major, students are advised to major in either biology or chemistry. Students who have a major in biology and a major in chemistry (double major) receive excellent preparation for admission to these professional schools.

Students who are interested in engineering should consult with Dr. Richard Calusdian, Department of Physics; students interested in law school should consult with Dr. Jordan Fiore, Department of History; pre-medical, pre-dental, and pre-veterinary advisors are: Dr. Kenneth Howe (Coordinator), Dr. Wilmon Chipman (Chemistry), and Dr. Walter Morin (Biology).

PROGRAM IN SCIENTIFIC AND TECHNICAL ILLUSTRATION

This program is offered as a cooperative effort of the Division of Natural Sciences & Mathematics and the Department of Art. It provides a basis for careers in Scientific & Technical Illustrations. Students interested in this program should major in either Art, one of the Natural Sciences or Mathematics. All students in this program are expected to take the following courses: AR 120 Basic Design, AR 220 Drawing I, AR 230 Painting I, AR 240 Sculpture I, AR 320 Drawing II, AR 499 (1 cr.) Directed Study. Students majoring in Art must minor in one of the Natural Sciences or Mathematics. It is strongly recommended that all students in this program take at least one course in each of the Natural Sciences and Mathematics. In addition to their regular advisors (majors and minors), students are encouraged to consult with members of the Scientific and Technical Illustration Committee. Members of this Committee are Dr. Hugo D'Alarcao and Dr. Stephen Smalley.

Undergraduate, Multidisciplinary & Pre-Professional Programs

RADIO & TELEVISION OPERATION & PRODUCTION MINOR

A joint program for a minor in Radio/Television, developed by the Departments of Speech Communication, Theatre Arts, and Communication Disorders and Media and Librarianship, for those students who have an active interest in the areas of Radio and/or Television. The two departments share responsibility in advising students who choose the Radio/Television minor. Practical application of the theories learned in class are an essential element of the program. Courses include:

- EN 280 Journalism
- CC 210 Voice and Diction
- or
- CC 215 Speech for Radio and Television
- CC 450 Communicative Theory
- ME 456 Radio and TV Production I
- ME 458 Radio and TV Production II
- ME 460 Graphics for Designing Media

ELECTIVE COGNATE COURSES (one course required)

- CC 320 Mass Communication in Society
- ME 452 Basic Photography
- ME 454 Script Writing for Radio, Television and/or Other Media
- CC or ME 498 Internship

Interested students should contact the department chairperson for further information.

RUSSIAN AND EAST EUROPEAN STUDIES MINOR

A multidisciplinary minor encompassing 18 credit hours to be selected from courses offered in the Departments of English, Foreign Languages, Earth Sciences and Geography, History, and Political Science and Economics. The major purpose of this minor is to provide students with a deeper understanding of the Eastern European Area (including Russia) and its culture.

Each student must achieve proficiency in the Russian Language (up to the intermediate level), but only six credits can be applied to the Area Program - or - any other Slavic language. Each requirement can be met by CLEP.

Three credits of each subject taken within the Slavic Area Studies can also be applied to student's major.

Students participating in the Program are encouraged to go beyond the minimum requirements and take additional General Education Electives in this area.

Additional courses can be taken, with the approval of the Slavic Council, at other Massachusetts State Colleges and colleges cooperating in the SACHEM Program.

Each student who completes the program will be credited with a minor in the area, and in addition will receive "A Certificate of Completing Area Studies: Slavic."

The requirements for the minor include:

- LR 151-152 Intermediate Russian I-II
- HI 318 History of East-Central Europe since 1918
- or
- HI 319 Modern Russia to 1917
- or
- HI 320 History of the USSR
- GS 404 Geography of the USSR

Select two of the following courses:

- EC 320 Comparative Economic Systems
- PO 371 Comparative Government
- PO 383 Comparative Political Systems

For further details contact Dr. Chester Nowak of the History Department.

Undergraduate, Multidisciplinary & Pre-Professional Programs

URBAN AFFAIRS MINOR

The College offers a multidisciplinary minor in Urban Affairs under the auspices of the Anthropology, Earth Sciences and Geography, History, Political Science and Economics, Psychology, and Sociology Departments. A major purpose of this minor is to provide students with a broader understanding and sensitivity of the complex problems facing the urban environment through the combined efforts of different disciplines at the College. The minor, through its internship program, is designed to provide students with an opportunity for direct contact and work in fields such as urban planning, urban government, social welfare, social psychology, and urban education.

Some examples of internships which are assigned according to the abilities, interests, and background of the student, and the current needs of the cooperating communities or agencies, are:

Through the Department of Earth Sciences and Geography

City and regional planning; Economic development — Land use; Environmental protection; Transportation studies; Cartography — drafting; Business — bank locations and market studies.

Through the Department of History

Internships working with historical affairs commissions; assisting community organizations in oral history projects, and writing about local history.

Through the Division of Behavioral Sciences

Work in human services agencies; Survey research in public institutions; Work in community organizations and voluntary agencies.

Option A

Students may choose four out of the following six courses:

- AN 307 Urban Cultural Dynamics
- HI 347 History of the American City
- PY 210 Applied Social Psychology
- GS 353 Urban Geography
- SO 306 Urban Sociology
- PO 376 Municipal Government

Internship: (6) credits. (Equal to 8 weeks, full time or 16 weeks half time)

Option B

Students may choose four out of the six courses listed under Option A, plus two courses from the list below:

- GE 354 Field Methods in Urban Geography
- HI 346 American Labor History
- PO 277 State and Local Government
- SO 312 Minority Relations
- SW 325 Community Organization
- 499 Directed Study in individual participating departments

Courses taken to satisfy requirements of a major may not be counted in the minor. Students interested in this program are encouraged to take their General Education electives in the area of minority studies.

Students interested in this program should contact:

1. Professor Robert Boutilier, Department of Earth Sciences & Geography
2. Professor Lucille O'Connell, Department of History

Undergraduate, Multidisciplinary & Pre-Professional Programs

Interdisciplinary Course Offerings:

ID 200 Introduction to Canadian Studies (3 crs.)

An interdisciplinary course which acts as the initial course for the general student and for those wishing to pursue a track in Canadian Studies. The following areas are included: anthropology, art, economics, education, English, French, geography, government, history, music, religion, sociology and theatre. May be repeated for credit.

ID 220 Introduction to American Studies (3 crs.)

Sophomores should enroll in this interdisciplinary course which is the initial course for the minor in American Studies. The course aims to examine from several perspectives one problem or period in the American experience. The topic, to be announced before registration, changes from year to year. Disciplines involved include: English, history, art, philosophy, political science and others.

ID 230 Introduction to Women's Studies (3 crs.)

An interdisciplinary approach to communicating the experience of being a woman. Through the study of such topics as language, gesture and movement, images, role models, sex roles, gender, biological and cultural conditioning, stereotyping, and discrimination, the course will explore the nature, accomplishment, and promise of women--as they have been seen and as they see themselves.

ID 420 American Studies Seminar (3 crs.)

Interdisciplinary topics, which change from year to year will be developed in a small group seminar setting. Juniors and seniors in the program will enroll in this seminar twice, studying two different topics. Total of 6 hours.



Dr. Harold Ridlon, Department of English, lecturer on Canadian literature

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Senior Clerk & Typist
 E. Patricia Flynn
Senior Clerk & Typist
 Dorothy Hoff
Clerk Typist
 Nancy Jenesky
Senior Clerk & Typist
 Kathleen Johnson
Senior Clerk & Typist
 Jeane Lincoln
Senior Clerk & Typist
 Betty Miller
Senior Clerk & Stenographer
 Katherine Muir
Junior Clerk & Typist
 Ronald Pariseau
Senior Clerk & Typist
 Elizabeth Poirier
Junior Clerk
 Jeanne Smith
Senior Clerk & Typist
 Stacia Young
Senior Clerk & Stenographer

ADMISSIONS
 Dorothy Pearl
Staff Assistant
 Marian Spencer
Staff Assistant
 Janet Taylor
Principal Clerk
 Anne Byrne
Staff Associate
 Gerardina Harlow
Principal Clerk
 Laurel Jones
Senior Clerk & Typist
 Jean Simmons
Instructional School Aid

BURNELL CAMPUS SCHOOL

CONTINUING EDUCATION

Marie Glynn
Staff Associate
 Dorothy Barrows
Junior Clerk & Stenographer
 Cheryl Dias
Junior Clerk & Stenographer
 Meredith Eckstrom
Senior Clerk & Stenographer
 Gloria Heaslip
Head Clerk
 Charlotte Michaud
Senior Clerk & Stenographer
 Dorothy Pacheco
Senior Clerk & Stenographer
 Stella Wagner
Senior Clerk & Stenographer
 Eleanor Wyatt
Principal Clerk
 Marcia Webb
Staff Associate
 Dale M. Crowley
Staff Assistant
 Linda B. Stafford
Staff Assistant

GRADUATE SCHOOL

LABORATORY INSTRUCTORS

MEDIA SERVICES

STUDENT RECORDS AND REGISTRAR

SUPERVISING LABORATORY TECHNICIANS

Allan Ryan
Staff Assistant
 Walter Deady
Technical Assistant I
 Tracie Fagan
Media Assistant
 Richard Gopen
Technical Assistant II
 Ruth Wagner
Junior Clerk & Stenographer
 Thomas Chaffee
Staff Associate
 Margaret Ashton Mercier
Junior Clerk
 Ronald Perry
Senior Clerk & Stenographer
 Joan Schlatz
Principal Clerk
 Patricia Wallace
Junior Clerk & Typist
 Kathryn Wilson
Junior Clerk & Stenographer
 James P. Conley
Staff Associate
 Robert Gibbs
Staff Assistant
 Sara Jane Johnson
Staff Assistant
 Joan P. Knudson
Staff Assistant
 Michael Norton
Staff Assistant

Administrative and Other College Offices

TECHNICAL ASSISTANTS

Stella Fisher
Technical Assistant I
 Ralph Houseman
Technical Assistant I
 Elwyn Shonio
Technical Assistant I
 Lillian McLean
Laboratory Technician
 Lillian Ricci
Technical Assistant I
 Anne Wheeler
Technical Assistant II
 Anthony P. Metrano
Staff Associate
 Elizabeth Sironen
Principal Clerk
 Vivian Senatore
Staff Assistant
 James Andrade
Senior Statistical Machine Operator
 Thomas Groh
EDP Programmer IV
 Barry Guaraldi
E.D.P. Programmer II
 Christine Lizotte
Data Entry/Keypunch Operator
 Karen Pacheco
Electronic Computer Operator
 William Singleton
Technical Assistant II
 Patricia Wilbur
E.D.P. Programmer I

OFFICE OF THE VICE PRESIDENT, ADMINISTRATION AND FINANCE COMPUTER SERVICES

FACILITIES

Denis Maguy
Staff Assistant
 Fortunato Graca
Chief Security Officer
 Rita Harrison
Senior Clerk & Typist
 Joseph Perry
Institution Maintenance Foreman

FINANCIAL AID

Philip Conroy
Staff Assistant
 Maureen Bicknell
*Administrative Assistant
 (Head Administrative Clerk)*
 Sara Hampton
Senior Bookkeeper

FISCAL AFFAIRS

Valerie Cabral
Senior Accountant
 Elizabeth Chapman
Principal Clerk
 Jeanne Driscoll
Principal Bookkeeper
 Rita Klocker
Principal Clerk
 Elizabeth Ludecker
Senior Bookkeeper
 Kelly McNary
Senior Bookkeeper
 Kathy Still
Junior Accountant
 Clare Werner
Senior Clerk & Typist
 Caroline Wright
Senior Bookkeeper

MAILROOM

Ellen Smith
Mailroom Clerk
 Shirley Wilbur
Central Mailing Room Clerk

PURCHASING

Peggy Johnson
Junior Clerk & Typist
 Gladys Moore
Junior Library Assistant

SWITCHBOARD

Willard Banks
Telephone Operator
 Mary Buckley
Telephone Operator
 Victoria Flinkstrom
Telephone Operator
 Joan M. Perry
Head Telephone Operator

OFFICE OF THE VICE PRESIDENT, STUDENT SERVICES

Peter Hartel
Staff Associate
 Carolyn Burnett
Senior Clerk & Typist
 Margaret Ouellette
Principal Clerk

ATHLETICS

Michael Storey
Staff Assistant
 Faye Hennebury
Junior Clerk & Typist

CAREER PLANNING AND PLACEMENT

Lisa Davidson
Staff Assistant
 Sheila Davis
Senior Clerk & Stenographer

HOUSING

Gerard Stenerson
Staff Assistant

STUDENT UNION

Monica Querzoli
Staff Assistant
 Judith Gaudreau
Senior Clerk & Stenographer
 Gina Guasconi
Senior Clerk & Typist
 Elaine Wambolt
Senior Clerk & Typist

VETERANS AND HANDICAPPED SERVICES

Nancy Clay
Staff Associate
 Patricia Lynch
Junior Clerk & Stenographer

HEALTH SERVICES

Margaret Flaherty
Staff Associate
 Carol Gage
Staff Assistant
 Matthew Gerkin
Staff Associate
 Annette MacDonald
Staff Associate
 Joan Nassif
Staff Assistant
 Carol Pickering
Staff Assistant
 Catherine Williams
Staff Associate
 Joan Luiz
Junior Clerk & Stenographer

Staff: Maxwell Library

Dr. Owen T. P. McGowan
Director, Library Services

Joyce Leung
Librarian

Robert Simmons
Librarian

Mabel Bates
Associate Librarian

Alan Howell
Associate Librarian

Carol Neubauer
Associate Librarian

Mary Myers
Assistant Librarian

Susan Pfister
Assistant Librarian

Barbara Britton
Library Assistant

Shirley Libby
Library Assistant

Joyce Marcus
Library Assistant

Emily Stone
Library Assistant

Adeline Ziino
Library Assistant

Ratna Chandrasekhar
Library Assistant

Noreen Asci
Principal Clerk

Virginia Deknis
Junior Library Assistant

Robert Dunn
Senior Clerk & Typist

Dorothy Eastman
Junior Library Assistant

Jacquelyn Fernandes
Junior Library Assistant

Marie Fleury
Senior Bookkeeper

Gail Hall
Junior Library Assistant

Kathleen Nerney
Junior Library Assistant

Nilda Poe'Sepp
Junior Library Assistant

Elizabeth Souza
Junior Library Assistant

Shirley Zeiba
Junior Library Assistant



In 1937 Bridgewater students do their research in Boyden Hall library

Faculty -- 1983-1984

as of August 31, 1983

Adrian Rondileau*	<i>President</i> A.B. (The City University of New York); M.A., Ph.D. (Columbia University); Honorary L.H.D. (Yankton College)
Murray Abramson*	<i>Professor of Mathematics and Computer Science and Chairperson of the Department of Mathematics and Computer Science</i> B.A. (Brooklyn College); M.A. (Syracuse University); MA., Ed.D. (Columbia University)
Walter Adamson*	<i>Professor of Political Science</i> B.A., M.A. in Ed. (New York University); M.A., Ph.D. (Fletcher School of Law and Diplomacy))
Marcia Jane Anderson*	<i>Professor of English</i> B.A. (University of Rochester); M.A., Ph.D. (Brandeis University)
Marcia Kay Anderson	<i>Instructor of Physical Education</i> B.S. (Upper Iowa University); M.S. (Indiana University)
Charles Francis Angell*	<i>Associate Professor of English</i> B.A. (Colby College); M.A., Ph.D. (University of Massachusetts)
Stanley Stephan Antoniotti	<i>Assistant Professor of Economics</i> B.A. (Marietta College); MA. (Lehigh University)
Barbara Holt Apstein*	<i>Assistant Professor of English</i> A.B. (Cornell University); M.A. (Columbia University); Ph.D. (City University of New York)
Donald B. Armfield*	<i>Associate Professor of Sociology</i> B.A. (City College of New York); M.A., Ph.D. (Harvard University)
Robert Charles Arruda*	<i>Professor of Romance Languages</i> A.B. (Brown University); B.S. (Georgetown University); M.A.T. (Brown University); M.A., D.M.L. (Middlebury College)
Maxine Marie Asselin*	<i>Associate Professor of Music</i> B.M. (Eastman School of Music); M.M. (Manhattan School of Music); Ph.D. (University of Connecticut)
Tracy Anthony Baldrate*	<i>Associate Professor of Education</i> B.S. (Bridgewater State College); M.Ed. (Boston College); Ed.D. (University of Alabama)
Philip Timothy Barker	<i>Assistant Professor of Astronomy (Joint Appointment with Wheaton College)</i> B.A. (Swarthmore College); Ph.D. (University of California at Santa Cruz)
Robert Jackson Barnett*	<i>Professor of Speech Communication and Theatre Arts</i> A.B. (Juniata College); M.A. (Pennsylvania State University)
Marilyn White Barry*	<i>Professor of Education and Chairperson of the Department of Educational Services</i> B.S. (Bridgewater State College); M.Ed., Ed.D. (Boston University)
Barry J. Batorsky	<i>Assistant Professor of English</i> B.A. (New York University), M.A. (Stanford University)
Samuel Baumgarten	<i>Assistant Professor of Physical Education</i> B.A. (Brown University); M.A. (New York University)
Robert Joseph Bent	<i>Associate Professor Mathematics and Computer Science</i> B.S. (Boston College); M.Ed. (Boston State College); M.A. (San Diego State College)
Peter L. Bergstrom	<i>Assistant Professor of Accounting</i> B.S., M.B.A. (Boston University); C.P.A.
Peter Alexander Bizinkauskas*	<i>Professor of Education</i> B.A. (Maryknoll College); M.Ed. (Boston State College); Ed.D. (Boston University)
Paul Alvan Blackford	<i>Assistant Professor of Geography</i> A.A. (Riverside College); M.A. (University of Hawaii)
Raymond Lorenzo Blanchard	<i>Associate Professor of Physics</i> B.S. (Southeastern Massachusetts University); M.Ed. (Bridgewater State College); M.Sc. (Rensselaer Polytechnic Institute)
Robert Francis Boutillier*	<i>Professor of Geology and Chairperson of the Department of Earth Sciences and Geography</i> A.B., M.A., Ph.D. (Boston University)
Michael Boyd	<i>Assistant Professor of English</i> B.A., M.A. (University of Texas at Austin); Ph.D. (University of Wisconsin at Madison)
Milton Lorimer Boyle, Jr.*	<i>Professor of Philosophy and Religious Studies</i> A.B. (Harvard University); M.Div. (Andover Newton Theological School); Ph.D. (Boston University)

*Indicates member of the Graduate Faculty

Faculty

Edward August Braun	<i>Associate Professor of Physical Education</i> B.S. (Central Connecticut State College); M.Ed., Ed.D. (Boston University)
Sandra Jean Brenckle	<i>Assistant Professor of Communication Disorders</i> B.A. (Stanford University); M.A., Ph.D. (Brown University)
James Robert Brennan	<i>Professor of Botany and Chairperson of the Department of Biological Sciences</i> B.S., M.S. (Virginia Polytechnic Institute); Ph.D. (University of Maryland)
Robert Allen Briggs	<i>Associate Professor of German</i> B.A., M.A. (Boston University)
Sandra L. Briggs*	<i>Associate Professor of Communications Disorders/Clinical Supervisor</i> B.S. (Lewis and Clark College); M.S. (Oregon College of Education); Ph.D. (University of Kansas Medical Center)
Morgan Cornelius Brown*	<i>Professor of Sociology</i> B.A. (Paine College); M.A., Ph.D. (Ohio State University)
Jon L. Bryan	<i>Assistant Professor of Aviation Science</i> B.S., M.B.A. (Southeastern Massachusetts University)
Richard Frank Calusdian*	<i>Professor of Physics and Chairperson of the Department of Physics</i> B.A. (Harvard College); M.S. (University of New Hampshire); Ph.D. (Boston University)
Zon-I Chang	<i>Associate Professor of Mathematics and Computer Science</i> B.S. (National Chung-Hsing University); M.S., Ph.D. (University of Illinois at Urbana)
David Ross Cheney*	<i>Professor of Philosophy</i> B.A. (Arizona State University); Ph.D. (University of Miami)
Joseph Biggi Chiccarelli*	<i>Associate Professor of Mathematics and Vice President, Administration and Finance</i> B.S., M.A. (Boston College)
Mariah Childs	<i>Instructor of Social Work</i> B.A. (Northeastern); M.S.W. (Simmons Graduate School of Social Work)
Wilmon Blackmar Chipman*	<i>Professor of Chemistry</i> B.A. (Harvard University); A.M. (Dartmouth College); Ph.D. (University of Illinois)
Drake Colin Chisholm*	<i>Professor of Psychology</i> B.A., M.A., Ph.D. (University of Massachusetts)
Anthony Cicerone	<i>Instructor of Economics</i> B.A. (Acadia University); M.A. (Northeastern University)
Guy Chandler Clifford	<i>Associate Professor of Political Science and Chairperson of the Department of Political Science and Economics</i> B.S. (Tufts College); M.A., Ph.D. (University of Massachusetts at Amherst)
Ann Oldham Coakley	<i>Assistant Professor of Physical Education</i> B.S. (Boston University, Sargent College); M.Ed. (University of North Carolina)
William Roswell Cole*	<i>Professor of History</i> A.B. (University of Massachusetts); M.A., Ph.D. (Boston University)
Richard T. Colgan	<i>Professor of Psychology</i> B.A., M.A. (University of Notre Dame); Ph.D. (Southern Illinois University)
Catherine Evelyn Comeau*	<i>Professor of Physical Education</i> B.S. (Boston University, Sargent College); M.A. (Columbia University); Ed.D. (Boston University)
Maureen Connelly	<i>Assistant Professor of English</i> B.A. (Regis College); M.A. (Boston College)
Anthony Charles Cotugno*	<i>Associate Professor of Spanish</i> B.S. (Northeastern University); M.Ed. (Boston State College); M.A. (Boston College)
Carolyn A. Cramer*	<i>Associate Professor of Physical Education</i> B.A. (University of Iowa); M.S. (Drake University); Ph.D. (Ohio State University)
David Mallory Culver*	<i>Associate Professor of History</i> A.B. (Colgate University); M.A., Ph.D. (Boston University)
Thomas Michael Curley*	<i>Professor of English</i> A.B. (Boston College); M.A., Ph.D. (Harvard University)
Hugo Trigo D'Alarcao*	<i>Professor of Mathematics and Computer Science</i> B.A., M.A. (University of Nebraska); Ph.D. (Pennsylvania State University)
Janice P. D'Avignon	<i>Assistant Professor of Psychology</i> B.A. (Boston State College); M.Ed., Ph.D. (Boston College)

*Indicates member of the Graduate Faculty

Faculty

Henry Owen Daley, Jr.*	<i>Professor of Chemistry and Chairperson of the Department of the Chemical Sciences</i> B.S. (Bridgewater State College); Ph.D. (Boston College)
Robert Alphonse Daniel*	<i>Professor of Education</i> A.B. (Howard University); M.A. (University of Iowa); Ed.D. (Pennsylvania State University)
Robert Dale Dawley	<i>Assistant Professor of French</i> B.A. (St. Lawrence University); M.A. (Middlebury College)
John Peter Deasy*	<i>Professor of Education</i> A.B. (Providence College); Ed.M., Ed.D. (Boston University)
Judith Ann Deckers*	<i>Assistant Professor of Education</i> B.S. (Worcester State College); M.Ed. (Boston University)
Evelyn L. Dedick	<i>Instructor of English</i> B.A., M.A. (The Catholic University)
David Paul Deep	<i>Instructor of Health and Physical Education and Vice President, Student Services</i> B.S. (University of Bridgeport); M.S. (Springfield College); C.A.G.S. (Northeastern University)
Harold Francis DeLisle*	<i>Associate Professor of English</i> B.S. (Bridgewater State College); M.A. (Boston College); Ph.D. (Tufts University)
John P. DeLuca	<i>Associate Professor of Aviation Management</i> B.S., M.B.A. (Boston University)
Joseph DeRocco*	<i>Professor of English</i> A.B., (Columbia College); M.A., Ph.D. (Columbia University)
Wayne F. Dickinson*	<i>Professor of Education and Chairperson of the Department of Elementary and Early Childhood Education</i> B.S., M.S. (State University of New York, Oswego); Ed.D. (Syracuse University)
Robert John Dillman*	<i>Professor of Earth Sciences, Vice President, Academic Affairs</i> B.S. (State University of New York at New Paltz); M.S. (Pennsylvania State University); Ph.D. (Clark University)
Arthur L. Dirks	<i>Assistant Professor of Theatre Arts</i> B.A. (Fort Hays State College); M.A. (University of Kansas); M.F.A. (Illinois State University)
Gerald Joseph Doiron*	<i>Professor of History</i> B.A. (University of Maine); M.A. (University of Rhode Island); Ph.D. (Boston University)
Marian Claire Doyle	<i>Assistant Professor of Education</i> B.S., M.S. (State University of New York at Potsdam)
Diana Draheim*	<i>Professor of Education</i> A.B. (College of the Holy Names); M.S. (California State College, Hayward); D.Ed. (Boston University)
John Jones Droege*	<i>Associate Professor of Art</i> B.S., M.A., M.A.T., M.F.A. (University of Notre Dame)
Paul E. DuBois*	<i>Associate Professor of Physical Education and Chairperson of the Department of Health, Physical Education and Recreation</i> B.S. (Springfield College); M.A., M.A., Ph.D. (Stanford University)
Roger T. Dunn*	<i>Assistant Professor of Art</i> B.A. (Pennsylvania State University); M.F.A. (Pratt Institute); Ph.D. (Northwestern University)
Lee Anne Dunne*	<i>Assistant Professor of Speech Communication and Chairperson of the Department of Speech Communication, Theatre Arts, and Communication Disorders</i> B.S. (Northwestern University); M.A. (Hunter College)
Warren David Englund*	<i>Associate Professor of Education</i> B.A. (Simpson College); M.S. in Ed. (Drake University)
Jacqueline Carol Enos*	<i>Associate Professor of French and Chairperson of the Department of Foreign Languages</i> B.A. (University of Massachusetts); M.A. (Radcliffe College); Ph.D. (Harvard University)
Richard L.C. Enright*	<i>Professor of Geology</i> B.A., M.S., Ph.D. (Rutgers University)
Kenneth Warren Falkner*	<i>Professor of Music</i> B. Mus. Ed. (Westminster College); M.A. (University of Connecticut); Ph.D. (University of Iowa)
Charles Frederick Fanning*	<i>Professor of English</i> A.B., M.A.T. (Harvard University); M.A., Ph.D. (University of Pennsylvania)
Henry Joseph Fanning, Jr.*	<i>Assistant Professor of Education, Dean, Program of Continuing Education</i> B.S. (Boston College); M.Ed., (Bridgewater State College); C.A.G.S. (Boston University); Ed.D. (Clark University)

*Indicates member of the Graduate Faculty

Faculty

Dorothy Rose Ferry*	<i>Associate Professor Music</i> B.Mus., M.Mus.Ed. (Boston University)
Jordan Dominic Fiore*	<i>Professor of History</i> B.S. (Bridgewater State College); A.M., Ph.D. (Boston University)
Robert Edward Fitzgibbons*	<i>Professor of Education and Chairperson of the Department of High School, Middle School and Adult Education</i> A.B. (Tufts University); Ed.M. (Temple University); Ph.D. (Boston University)
Genevieve A. Fitzpatrick, R.N.*	<i>Assistant Professor of Health</i> B.S. (Boston College School of Nursing); M.S. (Boston College Graduate School of Arts and Sciences); Ph.D. (Boston University)
Ruth A. Fitzpatrick	<i>Assistant Professor of Education</i> B.S., M.Ed. (Bridgewater State College)
Robert E. Frederick*	<i>Associate Professor of Physical Education</i> B.S., M.Ed. (Slippery Rock State College); Ed.D. (Brigham Young University)
Ira Ellsworth Furlong*	<i>Professor of Geology</i> A.B., M.A., Ph.D. (Boston University)
Marilyn Hayden Furlong	<i>Assistant Professor of Geography</i> B.S. (Bridgewater State College); M.A. (Clark University)
Vincent Harold Gannon*	<i>Associate Professor of Music</i> B.S. (Boston University); A.M.T. (Harvard University)
Mercer Georgopoulos	<i>Assistant Professor of Management</i> B.S. (Simmons College); M.B.A. (Southeastern Massachusetts University)
Joseph Matthew Giannini	<i>Associate Professor of Foreign Languages</i> A.B., A.M. (Boston University)
Walter Joseph Gleason*	<i>Associate Professor of Mathematics</i> B.S. (Boston State College); M.A. (Boston College)
Burton David Goldman*	<i>Assistant Professor of Education</i> B.S., M.Ed. (Bridgewater State College); Ed.D. (Boston University)
Herbert Jerome Greenwald*	<i>Professor of Psychology</i> B.S., B.A., M.A. (Columbia University); M.S. (Long Island University); Ph.D. (Columbia University)
Regina Mary Gross*	<i>Professor of Physical Education</i> B.S. (Boston University, Sargent College); M.A. (Columbia University); D.P.E. (Springfield College)
Stanley Hamilton*	<i>Associate Professor of Foreign Languages</i> B.A. (DePauw University); M.S. (Indiana State University); Ph.D. (University of Michigan)
Ruth Therese Hannon	<i>Assistant Professor of Psychology</i> B.A. (Wayne State University); Ph.D. (Catholic University of America)
Ray Grant Harper*	<i>Professor of Education</i> B.S.Ed. (Drake University); M.A., Ph.D. (University of Iowa)
Pauline Harrington	<i>Instructor of Political Science</i> B.A. (Wellesley College); M.P.A. (Northeastern University)
Janice Reimer Harris	<i>Assistant Professor of Physical Education</i> B.S. (University of Massachusetts at Amherst); M.Ed. (Boston University)
Edward J. Hart*	<i>Professor of Health</i> B.S. (West Chester State College); M.S. (West Virginia University); Ph.D. (University of Maryland)
Robert W. Haslam*	<i>Associate Professor of Health and Physical Education</i> B.S. (Northeastern University); M.A., Ph.D. (University of Maryland)
Joan W. Hausrath*	<i>Professor of Art</i> B.S., M.F.A. (Bowling Green State University); M.A. (Ohio State University)
Grace Healy	<i>Professor of Physics</i> B.A. (Regis College); M.A. (Catholic University of America); Ed.D. (Boston University)
Frederic F. Heap	<i>Assistant Professor of Management Science</i> B.S. (Babson College); M.B.A. (Suffolk University)
John Heller*	<i>Professor of Art</i> B.F.A., M.F.A. (Pratt Institute)
Jane Herrick	<i>Professor of History</i> A.B. (College of St. Teresa); M.A., Ph.D. (The Catholic University of America)
Walter Milton Hewitson*	<i>Professor of Botany</i> A.B. (Miami University); M.S. (Cornell University); Ph.D. (Washington University)

*Indicates member of the Graduate Faculty

Faculty

Curtiss R. Hoffman*	<i>Associate Professor of Anthropology</i> B.A. (Brandeis University); Ph.D. (Yale University)
Virginia Lee Hogg*	<i>Associate Professor of Health Education</i> B.S., M.Ed. (Bridgewater State College); Ed.D. (Boston University)
Dorothy Esther Howard	<i>Assistant Professor of Social Work</i> B.L.S. (Boston University Metropolitan College); M.S.S.S. (Boston University School of Social Work)
Kenneth Jesse Howe*	<i>Professor of Botany and Acting Coordinator of the Aviation Science Program</i> B.A., M.S. (University of Rochester); Ph.D. (Cornell University)
Joseph Henry Huber*	<i>Professor of Health and Physical Education</i> B.S. (West Chester State College); M.A. (University of Maryland); Ph.D. (Ohio State University)
Kathleen Browne Ittig	<i>Associate Professor of Economics</i> B.S. (Framingham State College); M.S., Ph.D. (Cornell University)
John Curtis Jahoda*	<i>Professor of Zoology</i> B.A. (University of Connecticut); Ph.D. (Oklahoma State University)
Edward Warren James*	<i>Associate Professor of Philosophy and Chairperson of the Department of Philosophy and Religious Studies</i> B.A. (Tufts University); Ph.D. (University of Southern California)
Donald R. Johnson	<i>Professor of English</i> B.A., M.A. (University of Hawaii); Ph.D. (University of Wisconsin)
Margaret Munson Johnson*	<i>Assistant Professor of Psychology</i> B.A. (Macalester College); M.A., Ph.D. (Boston University)
Ian Haviland Johnstone*	<i>Professor of Music and Chairperson of the Department of Music</i> B.Mus. (Mount Allison University); Mus.M. (University of Redlands); A.Mus.Doc. (University of Oregon)
John William Jones*	<i>Assistant Professor of Education</i> B.S., M.Ed. (Bridgewater State College); M.S. (Syracuse University)
Martha Drinkwater Jones*	<i>Assistant Professor of Education and Associate Dean of Students</i> B.S. (Bridgewater State College); M.Ed. (Tufts University)
Achille Adrien Joyal*	<i>Associate Professor of Philosophy</i> A.B. (St. Mary's University); A.M. (New York University)
Margaret Therese Joyce	<i>Assistant Professor of Education</i> B.S., M.Ed. (Bridgewater State College)
Peter Karavites	<i>Associate Professor of History</i> M.A. (University of Chicago); Ph.D. (Loyola University)
Donald Lundeen Keay*	<i>Professor of History</i> B.S. (Bridgewater State College); M.A.T. (Harvard University); Ph.D. (Boston University)
Ulysses Grant Keener*	<i>Associate Professor of English</i> B.A. (Columbia College); M.A., Ph.D. (Columbia University)
Paul Francis Kelley*	<i>Associate Professor of Education</i> B.S., M.Ed. (Bridgewater State College)
William Lowell Kendall	<i>Assistant Professor of Art</i> B.S. (University of Minnesota); M.S., M.F.A. (University of Wisconsin)
Thomas Allan Knudson*	<i>Associate Professor of Physical Education</i> B.S. (Wisconsin State College, LaCrosse); M.S., D.P.E. (Springfield College)
Margery Ann Kranyik*	<i>Professor of Education</i> B.S., M.S. (Western Connecticut State College); Ed.D. (Boston University)
Shirley Jane Krasinski	<i>Associate Professor of Physical Education</i> B.S. (University of Connecticut); M.S. (University of Massachusetts)
Shirley Miller Krick	<i>Assistant Professor of Education</i> B.S., M.S. (Indiana University)
Michael John Kryzanek	<i>Associate Professor of Political Science</i> B.A. (Marquette University); M.A., Ph.D. (University of Massachusetts at Amherst)
George C. Ladino	<i>Assistant Professor of Accounting</i> B.S. (Babson College); M.S. (University of Rhode Island)
Francis James Lambiase*	<i>Associate Professor of Mathematics</i> A.B. (Stonehill College); M.S. (Clarkson College of Technology)

*Indicates member of the Graduate Faculty

Faculty

Alan Lander*	<i>Professor of Instructional Media and Chairperson of the Department of Media and Librarianship</i> B.S., M.Ed. (Bridgewater State College); Ed.D. (Boston University)
Robert Nelson Larson*	<i>Professor of Political Science</i> A.B. (Columbia University); A.M. (Tufts University); A.M., Ph.D. (Boston University)
Rebecca Son nabend Leavitt	<i>Assistant Professor of Social Work</i> B.A. (Butler University); M.S.S.S. (Boston University School of Social Work)
Mei-Ling T. Lee	<i>Assistant Professor of Mathematics</i> B.S. (National Taiwan University); M.S. (National Tsing-Hua University); Ph.D. (University of Pennsylvania)
Thomas S. Lee*	<i>Assistant Professor of Instructional Media</i> B.S. (Bridgewater State College); M.Ed. (Syracuse University)
Harry August Lehmann*	<i>Associate Professor of Physical Education</i> B.S., M.Ed. (Springfield College)
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Directions for Correspondence

The general address for all correspondence is: Bridgewater State College, Bridgewater, Massachusetts 02324. Telephone (617) 697-1200. In order to avoid delay, correspondents are requested to note the following directions when requesting information and materials from the College.

Requests for:

Catalogues should be addressed to the Dean of Admissions or the Office of the Graduate School.

Continuing Education brochures should be addressed to the Continuing Education Office.

Transcripts:

Students who hold a bachelor's and/or master's degree or CAGS from this College should write to the Registrar. There is a charge of \$1.00 per transcript.

Students who have not completed their bachelor's degree should write to the Registrar for a transcript of courses taken through the Day Session, and to the Dean of Continuing Education for a transcript of courses taken through the Program of Graduate and Continuing Education.

Students who have not completed their master's degree or CAGS at Bridgewater State College should write to the Dean of Continuing Education for a transcript of courses taken. There is a charge of \$2.00 per transcript.

Inquiries concerning:

Admission to the undergraduate day school should be made to the Dean of Admissions.

Health services, housing, loans, and scholarships should be addressed to the Vice President, Student Services.

The Graduate School should be addressed to the Dean of Graduate and Continuing Education.

Continuing Education should be addressed to the Dean of Graduate and Continuing Education.

Placement should be addressed to the Director of Career Planning and Placement.

Financial Aid should be addressed to the Director of Financial Aid.

Alumni Affairs should be addressed to the Alumni Office.

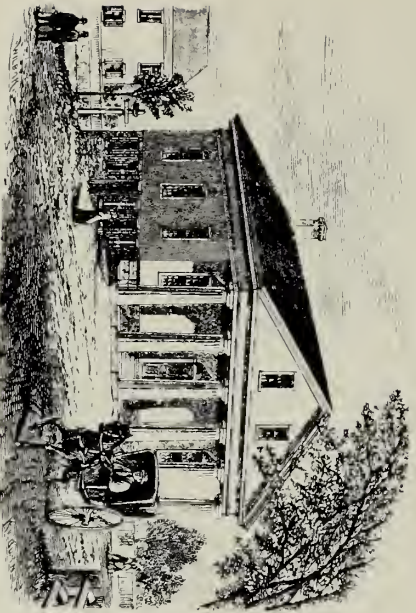
Academic employment should be addressed to the Director of Personnel.

Teacher certification should be addressed to the Director of Teacher Certification, Department of Education, Quincy Center Plaza, 1385 Hancock Street, Quincy, Massachusetts 02169.

Matters not covered above, and correspondence bearing upon the general interest of the College, should be addressed to the President.

Bridgewater State College

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